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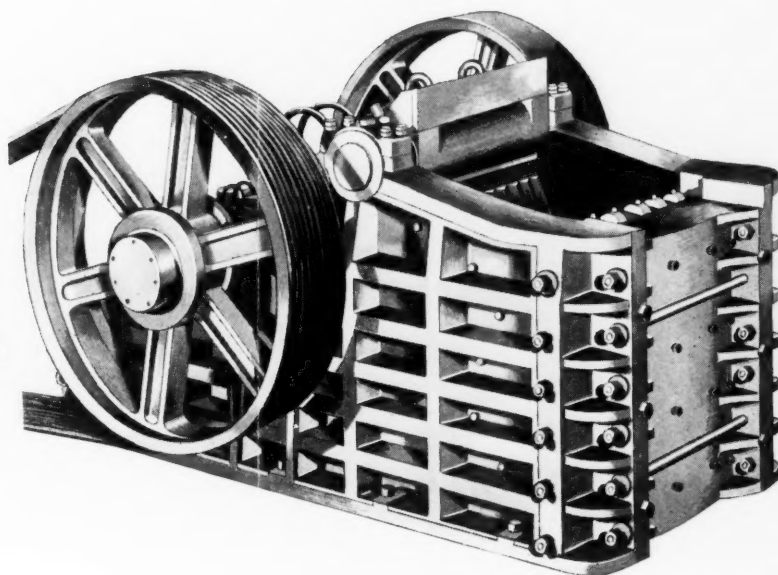
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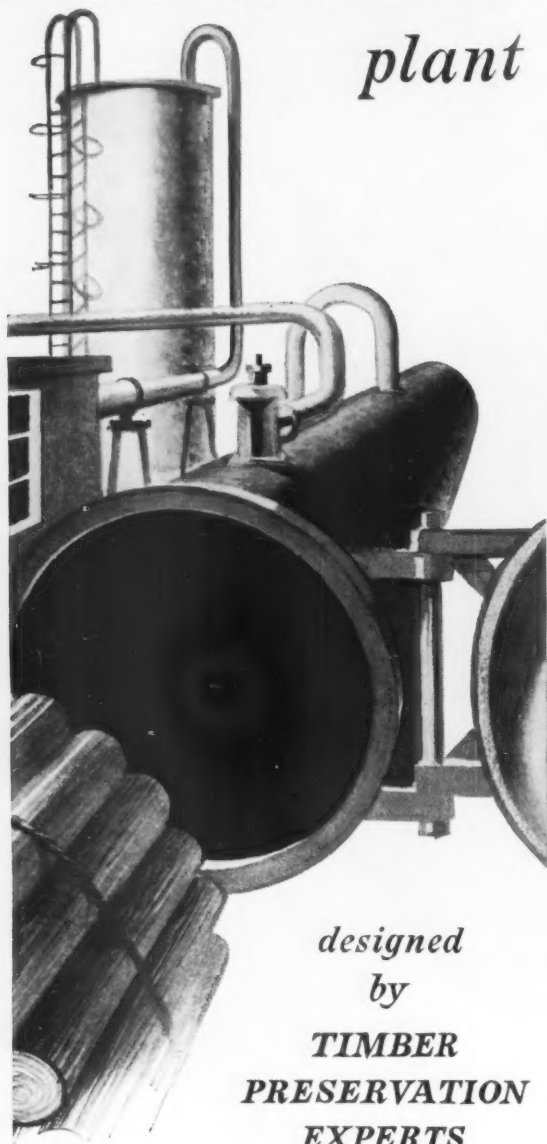
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NOTES AND COMMENTS

U.K. to Co-operate With European Coal and Steel Pool

The translation of Mr. Duncan Sandys to higher office, and the succession of Mr. Selwyn Lloyd to the post of Minister of Supply has not apparently halted the substantial progress which has been recently achieved towards the establishment of a Joint Council of Association representing the British Government and the High Authority of the European Coal and Steel Pool. It is understood that in the informal Paris conversations between Mr. Sandys and M. Monnet, the president of the High Authority, the British Government's rooted objections to full membership of the Pool were freely acknowledged, but it was agreed that mutual co-operation might yield fruitful results in the harmonization of British and West European policy upon matters of common interest. A draft treaty upon these lines has already been prepared and subject to the approval of the Council of Ministers of the Pool countries, will form the subject of the formal talks with the British Foreign Office which are due to take place in London early next month. Under the terms of the draft treaty it is believed that it will be possible to avoid ill balanced competitive expansion in the steel industry, and without the surrender of Britain's or the Pool's formal independence, the Council of Association will be able to promote a maximum measure of co-operation, and ensure the reduction or abolition of quotas, prohibitions and tariffs. Hitherto, the watching brief exercised by Sir Cecil Weir has been the only tenuous link between London and Luxembourg and it is appropriate that the more active collaboration which is now envisaged should be under the direction of the Minister of Supply assisted by departmental and industrial advisers.

Columbite Deposits in Johore

Considerable interest has been aroused in Malaya by the development of certain columbite deposits in Central Johore. These deposits have been developed by Chinese operators, and one Chinese proprietor has described those of the area between Muar and Yong Peng, near Paya Bakri, as being very rich.

It has been reported in the *Straits Times* that Mr. G. F. Gripper, Chief Inspector of Mines in the Federation, has stated that boom conditions might be considered to exist in the Paya Bakri district. He sounded a note of caution, however, by adding that although the strikes showed high

payability in patches, it remained to be seen how large the patches were. The area appears to give promise of becoming a productive mining field; although it has been stated that at the present rate of operations mining will not yield more than five tons of ore a year.

Southern Rhodesian Mining in 1953

Confidence in mining circles in Southern Rhodesia seems to have wilted considerably during the year, partly owing to the fall in market prices for the base metals and minerals and even more because of growing economic stringency. In this connection the achieving of the Central African Federation appears to have been welcomed in the Colony as broadening the economy and resources available to its constituent members.

Southern Rhodesia is a comparatively old mining field and shows obvious signs of maturity: in this respect it exhibits a marked contrast to the youth and extraordinary rapid growth of its partner Northern Rhodesia which last year had a mineral output valued at nearly five times that of its older relative—just under £95,000,000 as against £19,500,000—and assured of immense financial backing to guarantee further big increases in output. Southern Rhodesia in its turn is essential to the newer field for fuel supplies, as besides affording traffic facilities to Beira, it offers points of entry for natives seeking work from Mozambique and Nyasaland.

Economic conditions tended to deteriorate during 1953, the gold mines being particularly affected, costs increased and the grade of ore mined had generally to be raised—a familiar experience in a declining industry. The Chief Government Mining Engineer in his annual report recently to hand writes, "operating conditions in the gold mining industry are becoming increasingly restrictive: with the proposed increase in the cost of power supplied to the mines by the Electricity Supply Commission, and the increased railway rates, the death knell is being sounded to some producers, both large and small, who have been battling valiantly against almost overwhelming odds to keep in production."

Actually there was a very slight increase in gold production in 1953—501,057 f.oz. against 496,731 in the previous year—but the President of the Chamber of Mines stated at the last annual meeting of that body that despite this

"everything at the moment points to a decrease in 1954." The chief producers last year were: Cam and Motor 83,854 f.oz. (grade 5.85 dwt. per s.ton), Globe and Phoenix 41,103 (11.38 dwt.), Connemara 37,177 (3.75 dwt.), B. and S. 28,500 (2.35 dwt.), Dalny 19,300 (2.59 dwt.), Turk 15,915 (2.81 dwt.).

Besides increased charges for electric power and railway freights, native labour is steadily becoming more expensive: wages have increased 128 per cent in less than 10 years—from 28s. to 63.75s. a month—and allowances by approximately the same ratio so that they are 50 per cent of the wage rates. Thus with native labour costing some £66 a year mechanization is more and more necessary and that means increased capital expenditure. The number of natives employed by the gold mines last year was approximately 22,000 compared with around 30,000 five years earlier.

Every year Southern Rhodesia becomes more and more dependent on its base metal and mineral production to sustain its position as a mining country. In the first year of World War II, 1940, the gold output was 826,485 f.oz. and the base mineral production was valued at £2,206,375; last year's gold output was 501,057 f.oz. and base metals value £13,025,113. Of the base minerals produced the most important are, of course, asbestos, chrome and coal.

Asbestos was the most valuable production of the Southern Rhodesian mines last year being rated at £6,542,731 compared with £6,440,236 for gold; and despite some deterioration in market conditions the output was a record at 87,739 s.tons. The Government Mining Engineer's report anticipates a further gain of 3,000 s.tons in the current year. The Turner and Newall properties were the backbone of the production producing 55,780 s.tons valued at £7.85 per s.ton. The Report repeats the experience generally familiar where new mines are floated in a new field when it says "It would appear that too many properties opened up were too low grade and prospectus reports of from two per cent to four per cent were not borne out in practice. Rarely in any mine was the actual recovery as much as one per cent except those operated by the Turner and Newall group." Rhodesia Asbestos Ltd. were expected to bring the Tremerair and Shamala mines into production this year.

Though Southern Rhodesia is one of the world's most important producers of chromite the value of the production at £2,927,783 was less than half that of asbestos. Production is officially given as 463,030 s.tons. This appears to have been the best output for any year so far, though the deterioration of stockpiled ore in 1952 gave a figure of 861,839 s.tons for that year. Shortage of trucks continued to affect output.

Coal continues the most critical of all the mineral products of the Colony. Though the output increased last year by some 318,000 s.tons to 2,886,433 power plant stocks were at times down to less than 14 days' supply, and the native strike last February followed by the discovery of serious faulting in the N. shaft of Wankie's No. 2 Colliery, reduced stocks to 7/8 days' supply. It is thus hardly surprising that the progress of the Kafue and Kariba Gorge schemes to produce hydro-electric power are being most anxiously awaited.

Among minor products lithium minerals—petalite, lepidolite, amblygonite and spodumene—showed marked advance with a total production of 19,598 s.tons valued at £258,740 against 1,435 in 1952. Production of beryl increased by 587 s.tons to 1,774 and may be stable at that. Iron pyrites from the Iron Duke mine about doubled to 40,417 s.tons and 843 s.tons of corundum was won. Tantalum concentrates improved to 13.33 s.tons and columbium concentrates to 2.55. Tin and tungsten, both small, further declined.

Australia

(From Our Own Correspondent)

Melbourne, September 30.

The event of the month was the opening of the uranium treatment plant at Rum Jungle, Northern Territory, by the Prime Minister, the Hon. R. G. Menzies. The Rum Jungle mine is owned by the Commonwealth Government, but is operated by Consolidated Zinc Corporation, through a subsidiary company. An article on Rum Jungle appears on page 488 of this issue.

In North Queensland, search and discovery are progressing steadily. Mount Isa Mines Ltd. has announced that 30 leases showing more or less radio-activity, have been taken up, and their development is proceeding.

IMPORTANT URANIUM OCCURRENCES

Two of the most important occurrences of uranium ore so far discovered are Anderson's lode and the Mary Kathleen deposit, both held by Australasian Oil Exploration Ltd. The former is 130 ft. by 80 ft. in area, and diamond drilling has proved continuance of ore, so far, to a depth of 180 ft. Ore is equivalent to 400 tons per vertical ft. and the reported grade is 0.75 per cent uranium oxide.

The Mary Kathleen orebody, is similar to Anderson's in that both are masses. The dimensions are 400 ft. in length, by a probable mean of about 300 ft. The mass occurs on a steep hillside, and will be prospected by diamond drilling. Radiometric survey shows an exposed tonnage of 600,000 tons exceeding 2,000 counts, and of this, $\frac{2}{3}$ exceeds 4,000 counts. One costean has been completed, sampled and assayed, the result being 0.63 per cent uranium oxide over a width of 340 ft.

The question of the erection of a treatment plant on the Mount Isa-Cloncurry field will be considered and decided by the Atomic Energy Commission. In the meantime, much metallurgical test work must be done, and a reasonably accurate estimate of potential ore obtained by diamond drilling, which work must be carried out by the lease, and option holders. The uranium-bearing area, as so far delineated, is about 100 by 60 miles. No particular type of rock is favoured as the host for uranium ore occurrences. There is little secondary ore, and primary ore occurs practically at surface.

WESTERN AUSTRALIAN OIL

In the west, the dominant interest is the fortunes of West Australian Petroleum Pty. Ltd., drilling at Rough Range and Cape Range, Emu Gulf. The discovery of oil in the Rough Range No. 1 well, at a depth of 3,600 ft., making at the rate of 20 bbl. per hr., created great optimism among investors, but subsequent drilling to define the oil occurrence has been disappointing, the two subsequent wells being dry.

Cape Range No. 1 well, 30 miles west of Rough Range, met salt water below 3,000 ft. but drilling being continued, and showings of gas have been reported. Rough Range No. 1 well has reached about 10,000 ft. and has over 6,000 ft. yet to go to reach basement rocks.

The general opinion is that it is merely a matter of time before the drilling on Rough Range is successful in again locating the oil occurrence proved in No. 1 well. Meanwhile the company is pressing on with preparations to drill in the Kimberley country to the north, and it is stated that the immediate expenditure at both the North-west Basin (Exmouth Gulf) and the Fitzroy Basin (Kimberley) will approximate £A8,000,000.

The Coal Industry

(From Our Coal Correspondent)

In moving that the House take note of the annual report of the National Coal Board for 1953, Mr. Geoffrey Lloyd, Minister of Fuel and Power, dealt with some of the salient features of the report and gave a comprehensive resume of the progress of the industry in the current year. He commented that the biggest single change in the coal situation this year was the upsurge in inland consumption. Coal consumption in the chemical industry was up by 12½ per cent and in the motor industry it was higher by 8½ per cent.

Whilst industrial productivity continues to reach record levels the demand for still more coal will exist and it is estimated that the increase in coal consumption this year will be about 7,000,000 tons. The Government was determined that there should be no failure in fuel supplies which might halt or mar the buoyant progress of industry and consequently in May this year it was decided to import 2,000,000 tons of coal, thus enabling the Board to maintain the high level of coal exports. The internal situation was aggravated by a particularly bad summer which cost about 1,500,000 tons in extra consumption. The Government had re-examined the matter in the early days of September and it was decided to import a further 2,000,000 tons of coal, making a total of 4,000,000 tons. Imports would be coming in at the rate of about 50,000 tons p.m. during the winter.

In January the Coal Board and the National Union of Mineworkers had made an agreement by which they resolved to take all practicable measures to increase output by 2½ per cent as a reasonable minimum. From January to May there had been no improvement but since May there had been a considerable improvement in production. Absenteeism had been reduced and productivity had risen, and from July coal face workers had been producing 1.5 cwt. more coal per shift than last year.

Production so far this year was up by 2,000,000 tons and Saturday working was giving better results, and was expected to yield 12,000,000 tons of coal.

DECLINE IN MANPOWER

Since the agreement calling for increased output was made, manpower at the face had fallen appreciably, but despite the intense demand for coal the Coal Board had with commendable foresight increased the number of men employed on development work. A shortage of manpower remains the root cause of the coal deficiency.

In the past 20 months manpower in the collieries had fallen by 16,000. The need for men is greatest in the coal-fields of South Yorkshire and West Midlands—two of the most economically productive areas in the country.

In the debate which followed Mr. Lloyd's speech it was suggested that more miners could be attracted to areas where need was greatest if settling-in grants were made, following the precedent afforded by the decision of the high authority of the European Steel and Coal Community.

Mr. Lloyd spoke of the considerable progress in the re-equipment and development of the mines. The capital expenditure of the Board on collieries had risen from £26,000,000 in 1951 to £52,000,000 last year. This year the estimate was for about £75,000,000. In future it was expected to reach £100,000,000 and stay there for some time. Concern was expressed in that the results from this expenditure were not so encouraging as might be expected. However, as Mr. Noel-Baker, a former Socialist Minister of Fuel and Power, pointed out, it takes anything up to £14,000,000 before full production is achieved. In point of

fact, not a single new pit planned by the Coal Board has come into production and only three of the major reconstructions have begun to give their full results. The ex-minister gave it as his opinion that the Board has done well in raising the output by some 30,000,000 tons per annum since vesting day and O.M.S., from over 20 cwt. to 24.5 cwt.

In the discussion on the report the policy of the Government with regard to non-solid fuels was stated. Natural gas will be used if available and the use of oil is to be encouraged; it being estimated that another 2,000,000 tons of oil will be used this year. The British Electricity Authority has decided to equip seven of its large new power stations with dual firing arrangements.

NON-SOLID FUELS

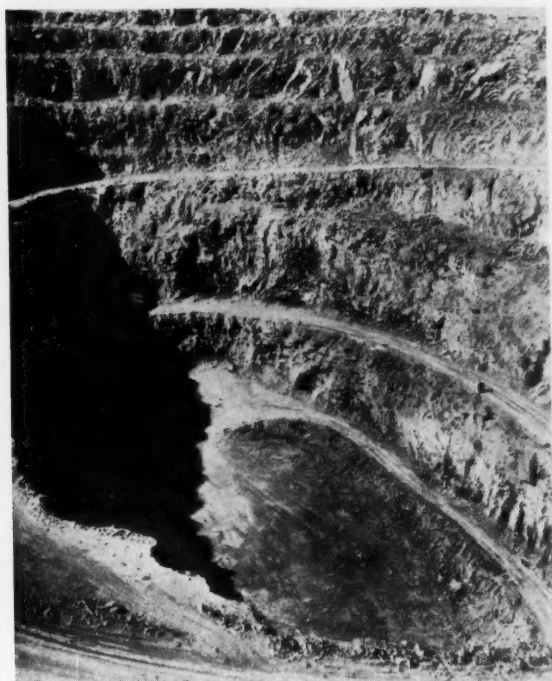
With regard to natural gas, an energetic search is being made in Britain with no marked success to date, although hopes are still entertained. In this field the American idea of liquifying methane and transporting it to industrial centres is receiving considerable attention by the gas industry and a good deal of work has been done on the technical features, and the cost of bringing the liquified gas to this country from either America or the Middle East. It is estimated that in the Middle East there is enough natural gas running to waste in the oilfields to supply half the present U.K. consumption of gas. This gas in the past has been wasted because of the difficulty of transportation to consumer centres, but a new form of refrigerated tanker has been designed having a lining of balsa wood in which the liquified gas can be carried. Methane when cooled to -260 deg. F. shrinks to one six-hundredth of its former volume and can be contained safely at atmospheric pressure. A technical mission from Britain is at present in America studying the various aspects of the project, where advance plans have been made to liquify gas near the Gulf of Mexico and to transport it up the Mississippi to Chicago. American experts estimate that the liquified methane—which has a calorific value almost twice that of manufactured town gas could be sold in London at about 43d. per 1,000 cu. ft. This compares very favourably with current average cost of 46d. per 1,000 cu. ft. for U.K. manufactured town gas.

HOW MUCH IS CONSUMPTION REALLY INCREASING

Much has been said on the rapidly rising inland coal consumption and the need for better conservation, but surely the problem is one of better coal for industry rather than better use of coal in industry? The following example may serve to illustrate this very important point. For comparison the years 1938 and 1953 have been chosen and whilst it is impossible to give exact ash percentages it must be conceded that coal now supplied to the domestic consumer and industry is very much dirtier than pre-war.

	1938 million tons	1953 million tons
Total coal output ...	234.5	246.0
Discard ...	7.25	22.0
Total saleable coal ...	227.25	224.0
Exports and bunkers ...	47.75	16.5
Inland consumption	179.50	207.5
5 per cent Ash (assumed) ...	8.975	
15 per cent Ash (assumed) ...		31.125
Effective inland consumption	170.525	176.325

Thus it is seen that on an ash free basis inland consumption is not increasing nearly so fast as it would appear and that the real nigger in the woodpile is high dirt content.



The Stobie open pit, work on which is now completed

The International Nickel Co. of Canada Ltd., has been engaged since the war on a vast programme of underground mining development at Sudbury, which is approaching completion. Its five underground mines will then have an annual hoisting capacity of 13,000,000 s.tons. This undertaking has already become the largest non-ferrous base metal underground mining operation in the world.

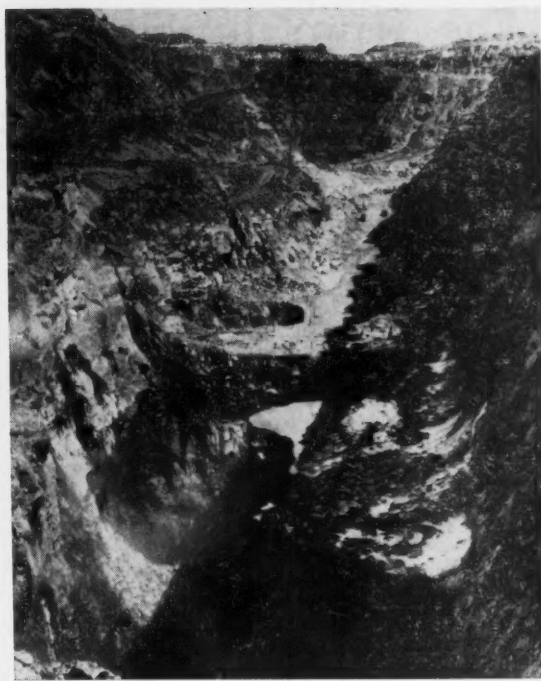
Four of Inco's mines—the Frood-Stobie, Creighton, Murray and Garson—are on the south range of Sudbury Basin, within ten miles of the city of Sudbury. The fifth mine, the Levack, is on the north range of the Sudbury Basin, 30 miles to the north-west of the city.

Two open pits have been operating on surface ores of the Frood-Stobie orebody; one was started in 1938 and the other in 1942. To meet the heavy demand for nickel during the second world war, open-pit production was accelerated until it accounted for over 40 per cent of the Inco's total tonnage. Consequently open-pit ore was depleted considerably ahead of schedule and it became necessary to speed up the programme, launched in 1943, for the replacement of open-pit tonnage by all-underground production.

NICKEL PRODUCTION AT INCO

At the end of 1953 Inco's nickel producing capacity was at a rate exceeding 275,000,000 lb. annually, compared with about 250,000,000 lb. at the close of 1952. If demand continues expanding, the company's scheduled production will permit the delivery of approximately 1,380,000,000 lb. of nickel over the five-year period ending with 1958. This will represent an increase of 325,000,000 lb. over deliveries for the five years, 1945-49, immediately preceding Korea.

This expansion has been made possible by brilliant metallurgical developments and by the vision and long-term planning, which is enabling the transition from part-surface, part-underground production to all-underground mining to be made while output was being increased. In 1953,



Blasthole mining at Frood. The pit after the 250,000 ton blast

11,095,199 s.tons of ore came from underground operations and 2,571,896 s.tons from open-pit working.

THE FROOD OPEN PIT

That completely underground operation has not yet been fully realized is due solely to the unexpected persistence of the huge Frood open-pit, which will not be exhausted till 1956. This pit is up to 1,400 ft. maximum width, and is now down to a depth of 500 ft. The last cut will take it to 580 ft. The combined length of the Frood and Stobie pits is $1\frac{1}{2}$ miles. Trucks hauling ore from the bottom have a journey of almost $1\frac{1}{2}$ miles around the side of the pit and up to the top.

In the summer of 1952, surface mining in the south end of the Frood pit reached the pre-determined depth at which it was no longer economical. At that point the sides which it was necessary to maintain at a 45 deg. slope to ensure safe operation, had tapered in width to such an extent that the exposed part of the ore was too narrow to be worked.

Operations then literally "went underground" in accordance with a programme of blasthole mining planned long in advance. While the churn drills and electric shovels carried on in the central and northern parts of the pit, underground crews took over all mining of the orebody in the southern part.

The first step of the change-over was to drive a 9 in. churn drill hole from the pit floor through to the stopes 40 ft. below. The churn hole was widened into a raise by diamond drilling, the raise then being expanded by drilling and blasting into a slot 18 ft. wide and 70 ft. long. Starting from this slot, the blasthole stope was extended across the bottom of the pit. Finally, the footwall ore remaining in the blasthole section between 3.5 and 8.5 pillars was removed by a clean-up blast, which sent 250,000 tons of ore tumbling down to the 600 level, squaring off an area of 220 ft. wide by 350 ft. long, in which underground blast stopes had holed through into the south end of the open-pit.

The Rum Jungle Uranium Project, Australia

The Rum Jungle uranium field, in the Northern Territory of Australia, was officially opened by the Prime Minister of Australia, the Rt. Hon. R. G. Menzies, on September 17. Australia thus stands as one of the world's major uranium producers. The project is of additional significance, not only because of the obvious value of its product, but also because the difficulties of climate and terrain associated with Northern Territory, together with its inaccessibility from the industrialized regions of Australia, have thus largely been overcome. The following article begins with a brief précis of the political and economic development of Australian uranium production, based in the main on past letters from our Australian correspondent, and goes on to describe the Rum Jungle field as it has been developed by Territory Enterprises Pty. Ltd., a wholly-owned subsidiary of Consolidated Zinc Pty. Ltd. formed as an operating agency to exploit the Rum Jungle deposits. The actions of this company are governed by an agreement with the Commonwealth government and its operations are financed by C.D.A. funds.

The opening of the Rum Jungle uranium project is notably significant because of the obvious monetary and strategic value of the uranium oxide which will be produced from this source. The opening ceremony on September 17 came as the result of co-operation between the Governments of Australia, the United States and the United Kingdom as well as between Australian governmental departments and certain mining companies, and of no less significance is the fact that by the inauguration of the Rum Jungle project, the traditional difficulties of terrain, climate and accessibility hitherto associated with development of industry in the Northern Territory have finally been overcome.

The Northern Territory has long been a focal point in the search for uranium in Australia. That State, together with Queensland, stands as an area wherein private enterprise has been encouraged. As a result of this liberal outlook by the authorities concerned, there has been reported a steady succession of discoveries from these two areas. Writing under date of September 3, 1954, our Australian correspondent pointed out that the Commonwealth Government is the sole buyer of uranium ore, and if development continued satisfactorily, a buying centre might be established at Mount Isa.

The final outcome of the search for uranium in Northern Territory has been the opening of the Rum Jungle Uranium Plant by the Rt. Hon. R. G. Menzies, Prime Minister of Australia.

It will be recalled that when reporting the development of Australian uranium production in 1953, our Australian correspondent pointed out in *The Mining Journal* of November 6 of that year, that dramatic and speedy results were not then anticipated. Australia's existing agreements

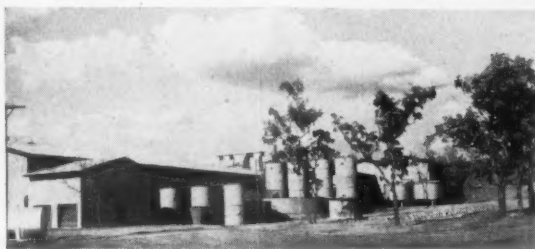
with the Combined Development Agency of the United Kingdom and the United States decreed that no selling price of Australian uranium be disclosed. This selling price was regarded as satisfactory to the seller and at the same time did not allow profiteering at the expense of the common defence effort.

However, writing almost a year later (*The Mining Journal*, September 3, 1954), our Australian correspondent

quoted the prices for uranium oxide as fluctuating from £A10 per ton for 0.25 per cent to £A504 per ton for 10.0 per cent. A contributor writing in our October 1 issue quoted the Australian price as from approximately £2 per lb. for ore with 0.25 per cent U_3O_8 contained to approximately £2 10s. per lb. for ore with 10 per cent U_3O_8 contained. He added that these prices—in keeping with other prices paid for uranium ore in other countries of the world—probably bore little relation to the prices actually paid.

These considerations are interesting in light of the development of Australian uranium in general and the Rum Jungle field in particular.

In 1949, a Northern Territory prospector, named White, recognized similarity between the illustrations of a booklet issued by the Bureau of Mineral Resources to stimulate the



The treatment plant at the Rum Jungle uranium project



Diamond drilling at Rum Jungle



Costeaning at Rum Jungle



Mr. D. Dyson (left) resident geophysicist at Rum Jungle with his field assistant. Mr. Dyson is the discoverer of the Dyson opencast mine

search for uranium and ores he had seen at the old copper workings at Rum Jungle. Specimens he sent to the Department of Mines at Alice Springs, nearly 1,000 miles away, were proved to be radioactive.

Officers of the Bureau of Mineral Resources made an immediate inspection of the area, detailed investigations being carried out at the end of the wet season early in 1950. Although early results were not encouraging, it was decided to sink two shafts to a depth of 100 ft. Eventually a cross cut entered ore at 22 ft. from one of these shafts and was extended to a considerable distance in high grade ore. This was only after nearly two years' work under extremely arduous conditions. Large-scale exploratory work has since proved the existence of a large body of ore.

With the importance of the discovery clearly demonstrated, the Australian Government opened discussions as to a basis for its development with a mission sent on invitation from the United States and the United Kingdom Governments. A formal agreement for the development of the Rum Jungle field was prepared and was executed on behalf of the Australian Government in January, 1953. The parties are the Government of the Australian Commonwealth and the Combined Development Agency, a joint agency of the Governments of the United Kingdom and the United States of America.

Under the agreement, the Agency was pledged to advance the capital and to provide certain technical assistance for the undertaking. As previously intimated, Australia agreed to sell to the Agency, at satisfactory prices and under conditions which fully guarantee Australia's interests, the project's output during an agreed term of years.

To promote exploitation of the Rum Jungle ore, the Government turned to several of the Australian mining companies.

ACTIVITIES OF CONSOLIDATED ZINC

Consolidated Zinc Pty. Ltd., although heavily committed in other ventures, formed a wholly-owned subsidiary, Territory Enterprises Pty. Ltd., as its operating agency. Its actions are governed by an agreement with the Government, funds for its operations are provided out of capital advanced by the Combined Development Agency, and all assets thus purchased or created, as well as the uranium produced in the plant, are the property of the Australian Common-

wealth or, in effect, the Australian people. The Company began operations on the Rum Jungle field in January, 1953, and in September, 1954, the first truckload of ore entered the plant.

Development work has been carried out on an impressive scale. Dyson's Mine, discovered in 1950 by Mr. D. F. Dyson, a geophysicist of the Bureau of Mineral Resources, has yielded a large tonnage of ore by opencut methods. The main shaft of White's Mine, on the initial discovery, has been sunk to a depth of 500 ft., and a large stockpile of ore accumulated. A channel 2,000 ft. long by 100 ft. wide by 30 ft. deep, for the diversion of the Finnis River, is nearly completed, and 15,000 ft. of exploratory costeaning has been carried out in the area surrounding the plant. A large amount of research work has been undertaken by the company, and, under arrangements made at its instance, on the treatment of ores from the field.

Consolidated Zinc undertook the task at Rum Jungle as a project of national importance, and for its work it receives only a management fee. It is not remunerated in any other way.

ACCESSIBILITY OF RUM JUNGLE

Rum Jungle could not have been more conveniently placed. It is close to a major airfield, the R.A.A.F. wartime base of Batchelor, a railway line connects it with the deep-water port of Darwin, about 50 miles north, and with the town of Birdum, about 300 miles south. A first-class road connects it with Darwin and Alice Springs, in the centre of Australia, and thence by rail to Adelaide, while abundant water for all purposes is available from nearby Crater Lake. The mine lies on a branch road from Stuart Highway, which connects Darwin with Alice Springs.

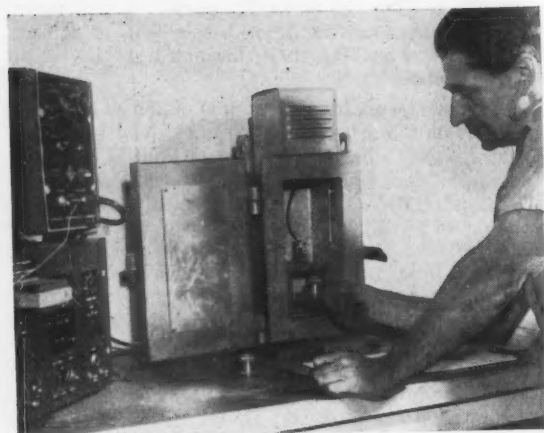
This village of Batchelor, where mine employers and their families are housed, now has a population of nearly 700. The town has a community centre, school, facilities for sports activities and a six-bed, two-ward hospital.

PROSPECTING BY GEIGER COUNTER

Since a couple of feet of overburden is sufficient to mask radio-activity, bulldozers have been at work along a "line



The 384 h.p. Montowal grab working at diverting the Finnis River



Samples of uranium ore are placed in a lead castle while electrical impulses activate a scaler to indicate degree of radioactivity of the sample

of interest" comprising a bed of slate some miles in depth. By removing the overburden to the width of the bulldozer blade and to a depth of from two to 20 ft. at various places, bedrock is uncovered to aid the investigations of the geiger counter. Six geiger counters and three scintillometers, the latter a much more sensitive instrument which can be used from low flying aircraft, are in use in exploratory work, and an electronic technician is retained full-time at the mine to keep them in working order.

Here the work which began in the first week of January, 1953, goes on six days a week, three shifts a day. While the crushing plant and its ancillary installations were being built, the ore on which it now feeds was being steadily stockpiled. White's Mine, the original shaft, is now down a considerable depth. It was planned to recover the ore by conventional underground methods of mining, but the ground has proved bad, soft, and wet, and requires close, heavy and expensive timbering. Experienced mining engineers state that it is the worst they have met anywhere in Australia. Work on the shaft is still proceeding, however, but it is purely exploratory, to prove the size, location and grade of the orebody before a change is made to open cutting.

This opencut operation will be unique, as the orebody lies at an angle and rather than removing the overburden from above, it will be removed from around the sides, thus



The Dorr thickener and solution storage tanks

exposing what amounts to a column of uranium bearing ore.

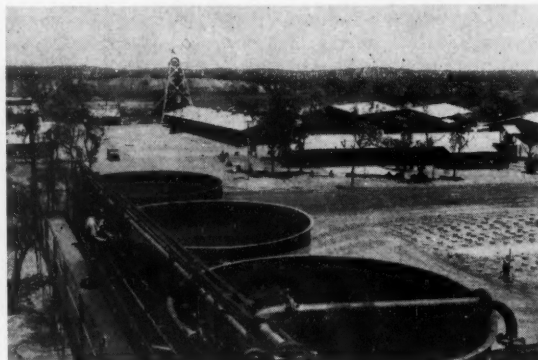
PROTECTION AGAINST FLOODING

The Finnis River, which runs nearby, rises during the wet season, and covers the projected opencut area. In order to counteract this, a new bed is being prepared to change the river's course. The British construction firm Wimpey Ltd. has been entrusted with this task.

By an examination of scant existing records the maximum peak flood volume of the Finnis has been ascertained. The new channel, 2,000 ft. long, 100 ft. wide and 30 ft. deep, is adequate to carry away that volume of water plus 50 per cent.

The earth moving equipment used on the project includes a 384 h.p. Montowal grab with 120 ft. boom and 6½ ton bucket. With the completion of the diversion channel, the Montowal grab will be converted into a crowd shovel for pushing ore on to the quarry trucks, and will begin work on the opencut.

On the other side of the mine site is Dyson's Mine, a complete opencut which was discovered during exploration for a site for another shaft. High-grade ore was uncovered



The Pachucas in which the uranium is taken into solution

by hand-trenching, although now all work is done by bulldozers. Little blasting is necessary since the rock is soft, and the bulldozers merely carve the ore out and push it over a loading ramp into waiting trucks. Work on Dyson's has ceased for the time being, as an adequate stockpile has been accumulated. Exploratory diamond drilling, both surface and underground, churn drilling, rotary drilling and waggon drilling are carried on ceaselessly throughout the Rum Jungle area.

THE REDUCTION PROCESS

The reduction process is, apart from one section, virtually the same as that by which copper or gold is recovered in many parts of Australia. One ton at a time, ore is emptied into the primary crushers from which it is carried by a rubber conveyor belt over a screen. Undersized ore is transported by conveyor belt to the fine ore bins and oversize ore to the Simonds cone crusher for further treatment.

The ore is wet ground in the ball mill, the resultant slimes being passed via the Dorr thickener, to the pachucas. In these, the largest rubberlined tanks in Australia, the uranium is taken into solution by sulphuric acid after which Oliver filters separate the uranium solution from the pulp. Between the Oliver filters and the production of the uranium oxide, access is denied to all save the technicians who designed and minister the secret process.

Small Capacity Multi-Purpose Excavator for Opencast Mining Operations

A new "baby" excavator, which should soon carve out a niche for itself in the opencast mining and quarrying industries in the U.K., is the multi-purpose, crawler mounted, $\frac{1}{2}$ cu. yd. excavator now being manufactured by Newton Chambers and Co. Ltd., of Thorncliffe, near Sheffield.

Known as the NCK 205, this latest addition to the company's range of excavators and cranes has been built to Koehring specification and has recently been extensively redesigned to incorporate a variety of new features developed as a result of research into new materials, methods and operating techniques. Non-metallic bushings on the turntable hook rollers replace bronze bushes to give longer life; operating levers and pedals are conveniently mounted for reduced effort and fast operation, and the crawler frame now consists of cross beams bolted to the side members. This provides a small amount of "give" in the assembly, which counteracts distortion and any tendency to crack which sometimes occurs in castings or at the welds of fabricated crawler units. It also permits the overall width of the crawler frame to be increased without modification when ground conditions call for greater stability.

COMPONENT UNITS

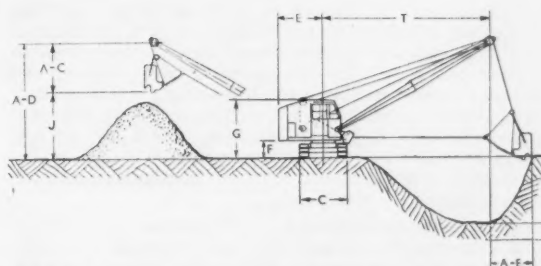
The crawler unit follows the successful design as used on the other models in the company's range of excavators including self-cleaning tumblers, smooth faced shoes with full-width hinges, rust-proofed adjusters and inverted U-shaped side members which overcome the problem of dirt collecting on the upper edges with risk of track fouling.

The upper machinery unit combines strength and rigidity with simplicity. The two main horizontal shafts are carried in a one-piece fabricated frame which ensures permanent alignment and the drive gears together with the primary chain transmission are protected by an oil-bath gear case.

The diesel engine develops 52 h.p. at 1,500 r.p.m. at full load speed and fully equipped and D.C. compound wound or A.C. squirrel cage induction motors can be furnished. The machine will climb a 30 per cent gradient. Further statistics reveal that the rotating speed is 5 r.p.m., the standard traction speed 1 m.p.h., and the hoisting speed for crane, grab-crane and dragline at full load is 171 f.p.m., the corresponding single line pull being 11,500 lb.



The NCK 205 in frontal operation



Working dimensions of the NCK model 205 dragline, where C is overall width of crawlers, E rear end radius, F clearance to counterweight, G height with boom lowered, J the dumping height, T operating radius, W depth of side cut and WA depth of end cut

The NCK 205 is available with face shovel, dragshovel, dragline, skimmer, crane and grab-crane attachments and conversions are quickly and easily carried out in the field. The face shovel has a 16 ft. welded box-section boom with 12 ft. 2 in. single dipper stick and heavy duty bucket fitted with manganese steel front. Fast crowd and retract with instantaneous electric dipper trip contribute to the high output obtainable from the 205.

WORKING AREAS

The dumping radius provides a maximum reach of 19 ft. 10 in. at 65 deg., which increases to 23 ft. at 35 deg., while the dumping height attains a maximum reach of 5 ft. 7 in. at 35 deg. and 8 ft. 3 in. at 65 deg. The machine can cut 6 ft. below floor level at a maximum digging reach of 24 ft. 10 in. radius at 35 deg.

With the drag shovel attachment, trenches can be dug to a depth of 17 ft. 9 in. and spoil discharged at a height of 10 ft. The $\frac{1}{2}$ cu. yd. dipper is 33 in. wide over the side cutters. The maximum digging reach is 27 ft.

The skimmer attachment employs the standard dragshovel boom and operating mechanism. By means of a special extended runway which is quickly attached to the boom, a level cut of 12 ft. is obtained together with a discharge height of 16 ft. 10 in. The bucket door is operated by the electric trip mechanism used for discharging the shovel dipper.

Dragline, crane and grab-crane attachments employ a lattice boom constructed of four chord angles with diagonal lacing and lengths from 30 to 50 ft. can be built up by means of 5 ft. and 10 ft. extensions. When equipped for crane duty, the NCK 205 has a maximum lifting capacity of 7½ tons and a 15 ft. boom jib with single line hook can be fitted to give increased outreach and faster operation.

From the foregoing advance technical data supplied by the company, it is obvious that the NCK 205 is well fitted to undertake operations in addition to those connected with opencast mining and quarrying in the United Kingdom. Indeed, its versatility places it in a strong position to cope with most types of work in the world of earth moving at home or abroad. By virtue of its size this machine will find a ready acceptance wherever potential working sites are badly served by road and rail. In such situations its demand would be justified as a machine to be in the van of heavier units whose entry to the site of operations must await easier access and a more favourable working terrain, both of which conditions could be effected by the NCK 205.

TECHNICAL BRIEFS

Frozen Mercury Casting

Because of the increasing demand for parts in a wide variety of metals and possessing intricate and complex shapes, the use of the frozen mercury process in producing parts to exacting specifications and at an economical, over-all cost, has assumed a vital role in to-day's production processes, in such fields as petroleum and heavy chemical processing, metal working and allied industries, according to Dr. I. R. Kramer, vice president of the Mercast Corporation, United States. For conventional materials such as aluminium, magnesium, and the brasses, bronzes, and steels, new conditions have resulted in demands for complex shapes which cannot be met by conventional methods without a prohibitively high cost.

A solution to these problems has been found in the frozen mercury process, where liquid mercury is poured into a steel die which is then immersed in a freezing bath at or below—100 deg. F. When the liquid mercury reaches a temperature of —40 deg. F., it freezes, forming the expendable pattern. The unique ability of mercury to fuse with itself, enables large and intricate shapes to be produced.

The frozen mercury process allows the production of relatively large parts of very considerable complexities. Steel castings have been produced having a dia. of 42 in. and weighing 300 lb.

Treatment of Low-grade Copper-Lead-Zinc ores

A method for the alkaline leaching of a low-grade copper-lead-zinc ore has recently been claimed in an American patent, (U.S.P. 2,655,472). The ore is first of all roasted and is then leached with an alkaline solution to which sodium cyanide is added if silver or gold are present. Silicates and a portion of the carbonates are then removed with lime, the solids being removed by filtration. Zinc powder is then added gradually in small portions to remove the H_2S group metals.

As an alternative procedure, copper powder may be added to remove silver and gold, lead powder to remove copper and zinc powder to remove lead. The zinc is recovered from the solution by electrolysis and the exhausted electrolytic solution is recycled to the leaching stage.

New Metal-forming Processes

In a recent address to the second Basic Materials Conference held earlier this year in the United States, Mr. H. H. Housner, manager, atomic energy engineering, atomic energy division of Sylvania Electric Products Incorporated, pointed out that superior powder metallurgical products can be obtained by pressing oxide-containing powder particles or metal compound powders. Certain new methods of powder metallurgy no longer limit the dimensions of the products.

As an example of the metal compounds for powder metallurgical production, Mr. Housner stated that sintered aluminium powder is characterized by its high tensile strength (50,000 p.s.i.) at room temperature and especially at elevated temperatures (35,000 p.s.i. at 400 deg. C. and 25,000 p.s.i. at 600 deg. C.). These sensational results were obtained by using a heavily oxidized aluminium powder of extremely small particle size. The oxide content ranges between 8 per cent and 16 per cent and determines the strength of the material: higher oxide content results in greater strength. These results were obtained by compacting the heavily oxidized powder at 25 to 50 t.s.i., sintering it at 500 deg. to 600 deg. in air. The sintered material is then hot-pressed at 500 deg. to 600 deg. C. and subsequently extruded at the same temperature.

In certain cases of compacting and sintering metal hydrides, it is advantageous to use metal hydride powders instead of metal powders, to compact these hydride particles, to sinter the compact and, at the same time, to decompose the hydride. Experimental work was done extensively with zirconium hydride powders, which compact readily. During sintering in vacuo, the zirconium hydride decomposes and the pure metal is formed and sinters to full density at a temperature of approximately 65 deg. of the zirconium melting temperature.

Production Plating of Aluminium

A method of the plating of aluminium and its alloys using a phosphoric acid anodizing pretreatment has been described by B. E. Bunce (*Electroplating and Metal Finishing* 6, 317, 1953). The metal is first of all mechanically polished, vapour degreased, alkali washed, and then rinsed in the conventional manner. The anodizing is then carried out in a phosphoric acid bath containing 250-500 g. per l. The current density employed is between 1.2 and 3 amp. per sq. dm. and the anodizing time between 10 and 15 minutes.

Nickel, silver and copper were all plated satisfactorily and chromium could be subsequently plated onto the nickel to produce bright chrome plate. The only disadvantage would appear to be that if the silver plated metal is intended to pass an electric current across the metal interface, the oxide layer presents too high a resistance for most purposes.

Correspondence

THE CASE FOR THE INDEPENDENT GEOLOGICAL CONSULTANT

The Editor, *The Mining Journal*.

Sir,—Having been in turn a government geologist, a mining group consultant, and a private consultant, I heartily support Dr. Davidson's plea that governments and large mining companies should help the independent geological consultant to survive and prosper. I, therefore, welcome your leader of September 10 commenting on his address.

One form of assistance could be a much greater use of private consultants on a retainer basis, while another could be the establishment of a system of rewards for outstanding successes. Some governments in fact do offer rewards for the discovery of uranium ores and certain other minerals, but as governments and mining companies are usually the chief benefactors from important mineral discoveries, the principle of a reward system for successful work could be more widely applied not only as at present, to companies and private individuals, but to government officials as well.

The independent consulting geologist often has a wider knowledge and experience of ore deposits than either the government geologist or the company consultant. The latter is generally chosen for his specialized knowledge of specific types of mineral deposits in which the company is mainly interested. Moreover, with a secure job and an assured pension, the position of the permanently employed company consultant is little different from that of a government official. Some government and company geologists, however, are just as hungry as self-employed geologists for material welfare, professional esteem and the opportunity for self expression. As an example, the valuable discoveries of the government geologists in our West African Colonies, and their detailed studies of the mining fields, have contributed very materially to the welfare of these Colonies and the Commonwealth, and to our knowledge of the mineral deposits in these territories.

Throughout the world, and especially in the under developed countries, there are great opportunities for the discovery of new mines and for the successful development of known orebodies which have not yet been explored in depth. In this sphere and in providing advisory services for governments and both small and large mining companies, there should be considerable scope for the activities of the independent consultant as well as the consulting firm. Nevertheless, as modern prospecting demands team work, it seems likely that most of the independent consulting geologists will eventually have to unite with other consultants to survive.

Yours faithfully,

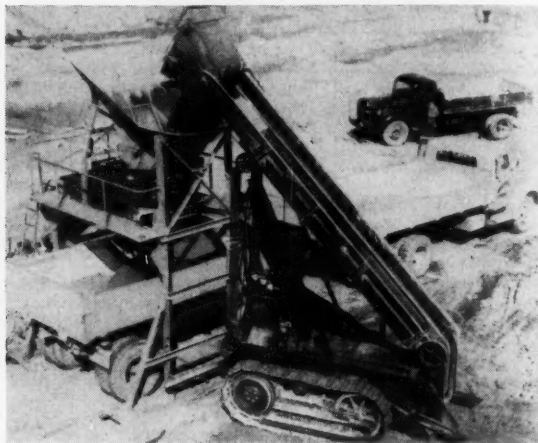
N. R. JUNNER.

"Four Firs,"
Marley Lane,
Haslemere, Surrey.
October 24, 1954.

MACHINERY AND EQUIPMENT

Mobile Overloader in Unusual Application

The versatility of the Merton Overloader has been demonstrated in recent weeks by a company of sand and gravel producers in the Malmo area of Southern Sweden. Faced with the problem of efficiently working glacial deposits for the extraction of saleable sand and gravel it was decided that instead of installing costly permanent and rigid structures for screening and hopper loading, a more mobile equipment was required.



The Merton Overloader in operation at Malmo, Sweden

A single deck vibrating screen of 80×40 was constructed on site and mounted on a structure of skids, the whole unit being high enough to allow lorries to be positioned underneath. To feed the vibrating screening unit the 15 ft. high discharge model Merton Overloader supplied by the Merton Engineering Co., England, was found to be ideal due to its height of discharge, output rate and digging capabilities.

The Overloader in this instance was mounted on a Fordson County crawler tractor. Despite the working headroom required for the screen and speed hopper the special high discharge Overloader was able to supply the material comfortably and as can be seen the headroom was more than sufficient to allow 6-7 ton lorries with 5 ton trailers to be drawn underneath for loading.

With the elimination of the small percentage of oversize stones and clay balls which are the drawback to many deposits of this kind, screened and saleable sand and gravel was loaded at the very satisfactory rate of over 60 cubic yards per hour. The rejected material was directed to the ground at the side of the unit and if after inspection found to be saleable was loaded from the ground by the Overloader. In addition to the output produced, the complete structure could be moved as a unit into new required positions by the Overloader, the whole production and re-siting and all handling of the plant being accomplished by two men.

Wide Roles of Industrial Furnaces

The wide roles played by various industrial furnaces has recently been emphasized by Birlec Ltd. In three new brochures the manufacturers show the new standard RS range of tool-room furnaces, the V.F.C. (vertical forced air circulation) furnaces for heat treatment operations up to 700 deg. C., induction melting furnaces, and the Birlec Tama low frequency induction melting furnaces.

The new standard RS model is a development of the RP and SA furnaces which are well tried in providing the metal industries with heat-treatment batch units for working temperatures of up to 1,050 deg. C. The V.F.C. furnaces are of the

vertical cylindrical type, enabling heavy charges to be handled easily by overhead crane or hoist. By the use of a powerful fan the air flow within the furnace is increased to the rate at which the charge can absorb the heat. Moreover, by incorporating a baffle in the furnace, the heated airflow can be given a positive direction through the charge, ensuring uniformity of treatment. The furnace essentially consists of a cylindrical heat insulated chamber with an inner concentric metal baffle.

The outstanding merit of induction melting is its ability to reproduce specific analyses again and again. The continual agitation of the melt thoroughly mixes the constituents of the charge thereby ensuring perfect homogeneity and permitting the production of alloys containing elements of widely different densities without risk of segregation. The manufacturers point out that Birlec Ajax induction melting furnaces meet these demands.

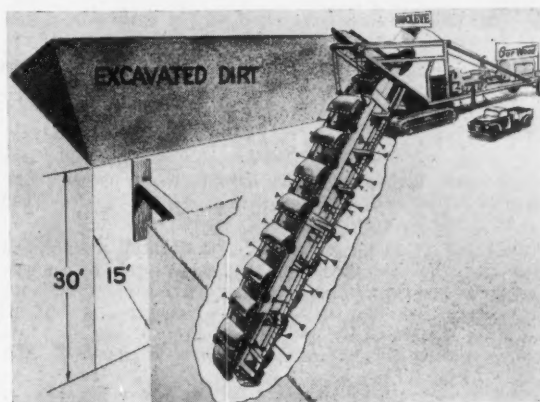
In its principle of operation, the Birlec Tama low frequency induction melting furnace employs a coil supplied with alternating current from normal frequency mains, and is equipped with an iron core to concentrate the magnetic field. One essential feature of the Birlec Tama low frequency induction furnace is that heat is generated within the charge and is not imparted to it from an outside source. Birlec Tama low frequency furnaces are being increasingly adopted for melting light alloys and copper-based metals.

A Large-Size Ditcher

A unit claimed to be the largest ditching machine in the world, capable of digging a ditch 15 ft. wide and 30 ft. deep, is now being designed by Gar Wood Industries of Wayne, United States. This new giant ditcher will be the latest in the famous Buckeye ditcher range and will sell in the United States for about \$100,000, or approximately 50 per cent of the cost of conventional excavating equipment now used for this type of work. The machine will be approximately 81 ft. long, 15 ft. high and the width, excluding the earth discharge conveyor, will be 12 ft. It will weigh approximately 65 tons.

At the digging end the machine will be mounted on crawler tracks, while the front will be supported on rubber tyred wheels. Two diesel engines fitted with torque converter drives will supply power to the tracks and to the bucket drive. The wheels will be steered by hydraulic power.

It is intended that this new ditcher will be used to excavate intercepting and outfall sewer trenches, water diversion aque-



The new Buckeye ditcher

ducts and other large ditches. The concessionaire for Gar Wood Industries in the United Kingdom is Mackay Industrial Equipment Ltd. It would appear from the illustration that the unit can provide interesting applications in the opencast mining industry.

METALS, MINERALS AND ALLOYS

COPPER.—In the States the after effect of the copper strikes is proving to be less painful than at one time seemed probable thanks to the diversion of 26,500 tons of copper destined for the stockpile to consumers in dire need. It is now being rumoured that the Government may also divert the November and December stockpile deliveries to consumers on the understanding that any stockpile deficiencies must be made up by June 30 next.

Meanwhile U.S. copper production is only gradually getting into its stride again after the stoppages and it seems unlikely that we shall see production back at its normal level until December.

Chilean copper is apparently still being sold in New York on a 30 c. basis so it may perhaps be hoped that the Chilean Government has seen the wisdom of refraining from holding copper users up to ransom. Both Chuquicamata and El Teniente are reported to be pushing production up to a maximum. The latter is reported to be taking on more employees while El Teniente is back on a seven day week.

Recent estimates from Potrerillos and Chuquicamata forecast their production for next year at respectively 180,000 and 45,000 s.tons compared with 173,000 and 45,000 s.tons in 1953. These figures are significant in that 1953 was not itself a good year for Chilean production and it would appear from these estimates that the tendency for the Chilean copper production to sag will continue despite the governments urgings for increased output, and despite reports that Chile has already contracted ahead for deliveries totalling 390,000 s.tons, or more than a year's production. However the significance of these estimates at this time cannot be judged at long distance and they may well prove to be no more than another tactical move in the negotiation of the new copper mining laws.

The general strike which was called for last Wednesday by Northern Rhodesia's native T.U.C. has now been postponed until next Monday. The general strike, which was to be in sympathy with the three week old strike of the African General Workers Union affecting building workers and timber cutters in the Copperbelt, has been strongly opposed at branch meetings of the African Mines Workers' Union and it seems as if the postponement of the general strike has been dictated by the necessity of ensuring a united front. Mr. Katilungu who, in addition to being president to the T.U.C., is also president of the African Mine Workers' Union is reported to have expressed the view on Tuesday that it is not too late for a compromise solution to be reached.

Meanwhile, this threat of a stoppage on the Copperbelt has contributed to the renewed rise in cash copper prices on the London Metal Exchange this week, although if the dock strikes continue to the point of putting export manufacturers on short time, the pressure on prompt metal may be eased.

LEAD.—In the States the lead market which had been quiet at the beginning of last week brightened up towards the week-end since when there has been good demand for November shipment at 15 c.

In Britain the dock strike has caused spot metal to become progressively tighter, and during the past week has been commanding premiums of upwards of £5 over the spot price which has itself risen by another £2 to £3 since our last.

Bureau of Mines figures of U.S. domestic lead consumption show at 719,000 s.tons a decline of approximately 10 per cent during the first eight months of this year compared with the corresponding period a year ago. In the same period lead imports into the States are also sharply down at 296,801 s.tons compared with 432,583 s.tons for the first eight months of 1953.

TIN.—Tin has continued to be a steady but featureless market both in London and New York. The London price has eased to below £730 for cash metal although the slight contango which developed last week on forward deliveries has again disappeared.

From the latest Tin Study Group figures for the leading producing countries, which we publish below, it is beginning to look as if Malayan production may top 60,000 tons this year for the first time since 1941. The recovery in, and better outlook

for, prices has resulted in quite a number of gravel-pump operators coming back into production, and the latest figures of the Malayan Chamber of Mines show 540 gravel-pump mines in operation compared with about 470 this time last year. It seems likely, however, that production from this source has not increased in proportion and A. Strauss and Co. estimate gravel-pump output during the second quarter of this year at about 5,525 tons compared with 5,189 in the first quarter and 5,419 in the second quarter a year ago. Corresponding figures for dredge operators are 8,075 tons in the second quarter of this year, 7,585 tons in the first quarter, and 6,641 tons in the second quarter of 1953.

Country	Period	1954	1953
Belgian Congo	Jan-Aug	6,954	8,983
Bolivia*	Jan-July	16,138	21,875
Indonesia	Jan-Sept	26,191	24,761
Malaya	Jan-Sept	45,059	41,413
Nigeria	Jan-Aug	5,145	5,373
Thailand	Jan-May	3,799	4,277

* Exports

Even allowing that this increase reflects competitive efforts by individual companies to secure higher quotas under the impending Tin Agreement, it is surprising that the increase should be so large as presumably whatever basis of assigning quotas is adopted past production figures are bound to be averaged out over more than one year's performance. Moreover, the bigger the increase in production now the sharper will have to be the cut back once quotas are imposed.

ZINC.—Zinc buying appears to have eased off in the States during the past week or so. Although the price has kept steady at 11½ c., there have been rumours of fairly small tonnages of foreign high-grade zinc being offered to Atlantic seaboard consumers at about ½ c. below the ruling price.

As with the case of lead, U.S. zinc imports in the first eight months of this year are sharply down at 398,461 s.tons compared with 535,179 tons in the same period a year ago. Zinc consumption in August showed an increase of some 10,000 tons, or 16 per cent, over July figures, but even so, consumption for the year to date at 558,766 tons is substantially below the corresponding 1953 total of 685,613 tons.

ALUMINIUM.—In a public speech in Boston last week, Mr. Nathanael V. Davis, president of Aluminium Limited, had some interesting remarks to make on the strategic and economic significance of Canada's low-cost hydro-electric power as a factor justifying increased U.S. reliance on Canadian production. Pointing out that the Kitimat project, and notably the recent plans for increased output (see *M.J.* page 459 Oct. 22) was designed in part to meet the requirements of the U.S. market, Mr. Davis said that as an exporter, his company faced problems of tariffs, preferences of local industry, and exchange difficulties. Nevertheless he believed that the idea of their supplying the U.S. market was economically sound. It had been said many times that the uses of aluminium would expand most rapidly if the price relative to other metals continued its favourable trend, and to keep aluminium prices down over a period it was absolutely necessary to turn to the lowest cost source of power.

This concept suggested that it was in the best interests of U.S. economy and, indeed, of the U.S. aluminium industry to regard Canada as a natural source of part of its aluminium requirements. For every man employed by a U.S. producer of aluminium ingots, hundreds were employed in U.S. fabricating establishments. Canadian aluminium was the life-blood of these workers and without it, their growth would be restricted.

In the course of his speech Mr. Davis also indicated that his company expected to sell about 250,000 tons of Canadian ingots in Britain next year, compared with the 184,600 tons delivered in 1953.

The government of British Guiana has under consideration a plan to supply electricity to all the coastal areas of the colony. The project, which it is estimated would cost B.W.I. \$10,000,000,

would feed some 300 miles of coast line and would, it is hoped, enable the bauxite mined locally to be processed in the colony instead of being shipped to Canada as at present. It would be interesting to know how Aluminium Limited will react to such a proposal.

The Norwegian firm Elektrokemisk A.S., is planning to build a new aluminium plant in Mosjøen, in northern Norway. The plant, which will employ about 250 people, is expected to produce about 20,000 tons of aluminium a year for export.

Iron and Steel

There may be a coal shortage this winter; but supplies of steel are more abundant than ever, and production is rising rapidly. It is an outstanding achievement that the steel industry has been able to keep pace with an unprecedented home demand and made possible a reduction of imports which by the end of the year will probably fall little short of a million tons. No longer is it necessary to purchase huge tonnages of semi-finished steel of European manufacture and only marginal tonnages of finished steel products are now arriving to meet emergency requirements.

Earlier in the year, for instance, shipbuilders were full of complaints about the shortage of steel plates and there was no doubt that this deficiency was at least partly responsible for delayed completions. But the difficulty was vigorously tackled and has now been overcome. The output of heavy ship plates and boiler plates is now adequate for industrial needs.

Pressure has switched to joists and sections, the demand for which has been swollen by substantial constructional works at home and abroad. Rollers have been quick to respond and bigger outputs promise soon to bring supply and demand into balance.

Tin plate production in the first nine months of this year has risen by nearly 100,000 tons but the needs of canners at home and overseas have risen to a still greater extent, and if this continues there is a likelihood of a severe shortage next year.

Demand for sheet steel has also exceeded the most sanguine anticipations. For this, the boom in the motor trades is primarily responsible, but there has also been a spate of overseas orders which has compelled the sheet makers to close their books to the end of the year and may involve some sacrifice of export business in 1955.

Stoppage of several blast furnaces for re-lining and other purposes has halted pig iron production and caused a run on stocks. It has also had the effect of stimulating an already active demand for scrap. Home suppliers have made a good response. Substantial quantities of home scrap are coming forward but arrivals from the Continent are on a reduced scale, and the further curtailment of shipments is indicated.

On behalf of BISCOR, orders have been placed with British shipbuilders for four new ore carriers each with a deadweight of 14,000 tons.

The London Metal Market

(From Our Metal Exchange Correspondent)

The London dock strike has assumed very grave proportions and has spread to other ports around our coasts, with a great number of ships being idle and held up. All this is having its effect on the supplies of metals to consumers, and those who have been working with small stocks in hand are no doubt the first to feel the pinch. Some large quantities of metals which were to have come to London have been diverted by the shipping companies to Continental ports, and in many cases discharged there, frequently at rather inconvenient places.

Tin has been quiet and almost without feature. Supplies of this metal are not so much affected by the dock strike, as industry here relies mainly on the production of English refiners, but in time the strike could make itself felt by interruptions of the supply of ore to the refineries. On Thursday morning the Eastern price was equivalent to £737 per ton c.i.f. Europe.

The copper market has experienced rather violent fluctuations recently and the increase in the backwardation, again to around

£20 per ton, is evidence of the tight position for near metal, and the situation is no doubt aggravated by the dock strike. In the meantime news that the general strike of workers in Rhodesia, which had been called for October 27, was not without its effect upon the market. It is understood, however, that this has been postponed, but the threat remains.

Lead has been a firm market, and the diversion of ships has created a demand for prompt metal which commands a premium of about £5 per ton over the October settlement which already stands at a substantial backwardation over the forward quotation.

The zinc prices fell back rather sharply but have since staged some recovery. A small backwardation has appeared within the last few days, the dock strike no doubt having some effect on supplies of prompt metal, although it must be remembered that a considerable quantity of zinc is produced in this country.

Closing prices and turnovers are given in the following table:—

	October 21		October 28	
	Buyers	Sellers	Buyers	Sellers
Tin				
Cash	£732	£732½	£729½	£730
Three months	£731	£732	£729½	£730
Settlement		£732½		£730
Week's turnover		335 tons		505 tons
Lead				
Current month	£107	£108	£109½	£110
Three months	£102½	£102½	£102½	£103½
Week's turnover		3,150 tons		2,050 tons
Zinc				
Current month	£82½	£83	£80½	£81
Three months	£82	£82½	£80½	£80½
Week's turnover		4,250 tons		2,675 tons
Copper				
Cash	£267½	£269	£282	£282½
Three months	£255½	£256	£260½	£261
Settlement		£269		£282½
Week's turnover		5,600 tons		3,075 tons

OTHER LONDON PRICES — OCTOBER 28

ANTIMONY

English (99%) delivered,	
10 cwt. and over	£210 per ton
Crude (70%)	£200 per ton
Ore (60% basis)	22s./24s. nom. per unit, c.i.f.

NICKEL

99.5% (home trade)	£483 per ton
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OTHER METALS

Aluminium, 99.5%, £156 per ton	Osmium, £46 oz. nom.
Bismuth	Palladium, £7 oz.
(min. 2 cwt. lots) 16s. lb.	Platinum, £30/£31
Cadmium (Empire), nominal	Rhodium, £43 10s. oz.
Chromium, 6s. 5d./7s. lb.	Ruthenium, £22 oz.
Cobalt, 21s. lb.	Quicksilver, £110
Gold, 250s. 10d. f.o.z.	ex-warehouse
Iridium, £43 oz. nom.	Selenium, 35s. 9d. nom.
Magnesium, 2s. 4d. lb.	per lb.
Manganese Metal (96%-98%)	Silver 74½d. f.o.z. spot and
£225/£262	74½d. f.d.
Osmiridium, £40 oz. nom.	Tellurium, 15s./16s. lb.

ORES, ALLOYS, ETC.

Bismuth	60% 8s. 3d. lb. c.i.f.
	50% 7s. 3d. lb. c.i.f.
Chrome Ore—	
Rhodesian Metallurgical (semi-	
frangible) 48% ..	£12 8s. 0d. per ton c.i.f.
" Refractory 45% ..	£12 14s. 0d. per ton c.i.f.
" Smalls 44% ..	£8 5s. 6d. per ton c.i.f.
Magnesite, ground calcined ..	£26-£27 d/d
Magnesite, Raw	£10 - £11 d/d
Molybdenite (85% basis) ..	102s. 4d. - 103s. per unit c.i.f.
Wolfram and Scheelite (65%) ..	192s. 6d./197s. 6d. - *U.K.
	Gov't Stock d/d 195s. 0d. plus charges
Tungsten Metal Powder	16s. 9d. nom. per lb. (home)
(98% Min. W.)	
Ferro-tungsten	13s. 9d. nom. per lb. (home)
Carbide, 4-cwt. lots	£37 6s. 3d. d/d per ton
Ferro-manganese, home	£54 15s. 0d. per ton
Manganese Ore Indian c.i.f. Europe	
(46%-48%)	68d./70d. per unit nom.
Brass Wire	2s. 9½d. per lb. basis
Brass Tubes, solid drawn	2s. 2½d. per lb. basis

* ex-Government stock for prompt delivery from October 28

(By Our Stock Exchange Correspondent)

West African gold shares were again a good market. Job-

The better feeling in the metal market encouraged Eastern Tin producers and a further boost to this section was given by Renong which raised the annual dividend to 45 per cent against 30 per cent. Nigerian tin shares were largely unchanged. Elsewhere, the lead and zinc section turned easier except New Broken Hill and Mount Isa. South African collieries were quiet but Wankie continued its recent steady improvement.

	Price	+ or -		Price	+ or -		Price	+ or -		Price	+ or -
	Oct. 27	on week		Oct. 27	on week		Oct. 27	on week		Oct. 27	on week
FINANCE			O.F.S.			DIAMONDS & PLATINUM			TIN (Nigerian and Miscellaneous) contd.		
African & European....	8½	—	Freddies	7/3	—	Anglo American Inv..	7½	—	Kaduna Prospectors	2/9	—
Anglo American Corp'n.	3½	—	Freddies Consolidated	20/3	-9d	Casts	27½	+6d	Kaduna Syndicate	2/9	—
Anglo-French	27/6	+1/10½	F. S. Geduld	54	—	Cons. Dirms. of S.W.A.	6½	—	London Tin	6¼	—
Anglo Transvaal Consol.	25/-	-3/11	Geffries	19/3	—	De Beers Defd. Bearer	5½	+½	United Tin	3½	—
Central Mining (£1 shrs.)	47/3	-3d	Harmony	40/9	—	De Beers Pfd. Bearer	17½	—			
Consolidated Goldfields	56/3	—	Joraine	15/7½	—	Pds Platinum	10/-	-3d			
Consol. Mines Selection	46/3	+1/3	Lydenburg Estates	25/7½	-1d	Watervaal	16/3	—			
East Rand Consols....	3/6	—	Merrispuit	11/7½	-1¾				SILVER, LEAD, ZINC		
General Mining	4½	—	Middle Wits	18/3Xr	—	COPPER			Broken Hill South	53/9Xd	-1/3
H.E. Prop. 5/- Shares	11/3	—	Osifits	81/3	+1/10½	Chartered	87/-	—	Burma Mines	27½	—
Henderson's Transvaal	8/3	+6d	President Brand	79/4½	+7½	Esperanza	5/7½	-1½d	Consol. Zinc	39/-	-1/3
Johannes	48/9	-1/3	President Steyn	36/3	-1/9	Indian Copper	4/9	-1½d	Lake George	7/9	-3d
Rand Mines	42/6	—	St. Helena	30/7½	+1½	Messina	5½	—	Mount Isa.	45/3Xr	-3d
Rand Section	37/3	+6d	Virginia Ord.	15/11	—	New Bang	4½	—	New Broken Hill	33/9	+6d
Union Corp. (2½ units)	37/3	-1/3	Welkom	30/7½	-10½	Rhod. Anglo-American	82/6	+3d	North Broken Hill	66/3Xr	-2/6
Vereeniging Estates....	4½	+½	Western Holdings	5½	—	Rhod. Katanga	9/6	+6d	Rhodesian Broken Hill	12/6	-9d
Writts	40/7½	+7½d				Rhodesian Selection	22/9	-1/3	San Francisco Mines	23½	-1½
West Wits	46/3	-7½d				Rhokana	28½	—	Uruwira	4/6	—
			WEST AFRICAN GOLD			Rio Tinto	40½	—			
RAND GOLD			Amalgamated Banket	2/7½	+3d	Roan Antelope	21/3	-10½	MISCELLANEOUS		
Blyvoors	34/3	+2½	Ariston	7/9	+4½	Selection Trust	47/6	-2½	BASE METALS & COAL		
Brakpan	8/9	—	Ashtanti	25/3	+1/3	Tanks	5½	—	Amal. Collieries of S.A.	49/6	—
City Deep	15/7½	+7½d	Bibiani	5/6	+1½	Tharsis Sulphur Br.	7½	+½	Associated Manganese	45/-	-3d
Consol. Main Reef	20/7½	+3d	Bremang	1/9	—				Cape Asbestos	12½ XR	—
Crown	43/13	+7½d	G.C. Main Reef	4/6	+1½d	TIN (Eastern)			Consol. Murichion	57/6	-4½d
Daggas	68/1½	-1½d	Gono	3/3	+1½d	Ayer Hitam	28/6	+3d	Malayan Dredging	26/6	—
Doornfontein	33/-	-16d	Lyndhurst Deep	1/4	+1½d	Chonging	8/6	+3d	Pengkalen	11/9	+6d
Durban Deep	31/3	—	Marlu	1/6	+1½d	Hongkong	9/-	—	Petalung	7/7½Xr	—
E. Daggas	12/6	—	Taqwah & Abosso	4/3	+3d	Ipoth	20/9	+9d	Rambutan	17/-	—
E. Geduld (4/- units)	28/-	+3d	W. Selection & Dev	9/9	+1/-	Kamunting	8/6	+9d	Siamese Tin	6/6	+1½d
E. Rand Props	2½	—				Kepong Dredging	4/7½	—	Southern Kinta	19/3	—
Geduld	12/3	-6d	AUSTRALIAN GOLD			Kinta Tin Mines	10/3	+3d	Malayan Nickel	26/6	—
Govt. Areas	17/-	-9d	Boulder Perseverance	9/-	—	Malayan Dredging	28/3	—	S. Tronoh	11/9	+9d
Grootvlei	9/9	-3d	Gold Mines of Kalgoorlie	14/3	—	Pahang	11/9	+6d	Sungei Kinta	11/-	-3d
Libanon	22/9	-3d	Great Boulder Prop.	8/9	-3d	Pengkalan	9/-	—	Tekka Taiping	5/9	—
Lipuaards Vlei	22/9	-6d	Lake View and Star	16/9	+6d	Rambutan	17/-	—	Tronoh	26/3	+6d
Marievale	20/9	-6d	Mount Morgan	18/6	—	Siamese Tin	6/6	+1½d			
Modderfontein East	13/3	+3d	North Kalguri	4/-	-1½d	Southern Kinta	19/3	—	CANADIAN MINES		
New Kleinfontein	10/9	+3d	Sons of Gwalla	4/-	-1½d	Malayan Nickel	26/6	—	Dome	\$30½	—
New Pioneer	12/3Xr	—	Western Mining	11/10Xr	—	S. Tronoh	11/9	+9d	Hollinger	\$34	+½
Randfontein	72/6	+9d				Sungei Kinta	11/-	-3d	Hudson Bay Mining	\$81	—
Robinson Deep	22/6	+6d	MISCELLANEOUS GOLD			Tekka Taiping	5/9	—	Michigan Nickel	\$89½	—
Rose Deep	13/3	+3d	Cam and Motor	9/4½	—	Tronoh	26/3	+6d	Mining Corp'n. of Canada	\$5½	—
Simmer & Jack	22/6	-1½d	Champion Reef	4/10½	—				Noranda	\$140	+1
S. A. Lands	22/6	-1½d	Falcon Mines	7/9	+1½d	TIN (Nigerian and Miscellaneous)			Quemont	\$7½	+½
Stillfontein	27/6	-3d	Globe & Phoenix	23/9	—	Anglo-Iranian	15½	+1½	Yukon	3/9	—
Sub Nigel	39/4½	-7½d	G.F. Rhodesian	7/3	-1½d	Apex	24/-	+3d			
Van Dyk	4/-	-3d	London & Rhodesian	5/7½	+6d	Attack	48/9	-2/6	OIL		
Ventersop	13/-	-6d	Metopa	1/9	—	Bisichi	6/10½	-1½d	Burmah	5½Xr	+½
Viakfontein	19/1½	+1/10½	Mytose	4/7½	-3d	British Tin Inv.	16/7½	—	Canadian Eagle	43½d	+3/10
Vogelstrubbe	6/9	—	Nundydroog	5/9	—	Ex-Lands Nigeria	13/3	+3d	Mexican Eagle	22½	+1½
West Driefontein	6½	—	Ooregum	4/7½	—	Geevor tin	3/14	-3d	Go & Base Metal	32/6	+1/6
W. Rand Consolidated	54/4½	+1/3	St. John d'el Rey	14/9	-3d	Jantar Nigeria	10/-	—	Trinidad Leasehold	22½	+1/6
Western Roofs	48/9	+1/3	Zams	39/9Xd	+6d	Jon Tin Am.	14/3	-3d	T.P.D.	29/-	+1/6
								Ultramar	29/3	+1/1½	

COMPANY NEWS AND VIEWS

Siamese Tin and the Lowlands Lead Mine Venture

Two recent announcements from Siamese Tin Syndicate; one, informing that Rio Tinto had withdrawn from further participation in the Lowland Lead Mines venture; the other, announcing the resignation of the company's chairman, Mr. K. O. Hunter, and the appointment of his successor, Mr. R. S. G. Scott, who is the nephew of the founder of the company have now been explained in a circular to stockholders.

The circular to stockholders now issued states that the resignation of the chairman, Mr. K. O. Hunter, was concerned solely with the question of the Lowland Lead Mines, his views on this subject being contrary to the majority of the directors on the board.

All this makes interesting but rather puzzling reading. In the first place, it is easy to agree with the circular which explains that the reason Rio Tinto withdrew was that "the enterprise was unlikely to develop on a scale sufficiently large to be of interest to them." This makes sense, as it is difficult to imagine a company of Tinto's stature being permanently interested in such a small venture. Secondly, whether or not Siamese Tin should continue with the venture is essentially a mining question and depends upon the reports which are expected very shortly from "the best independent professional advice." If these reports concur to show that a reasonable profit can be made on a lead price of say £90 per ton, then there is something to be said for the company carrying on with the venture rather than abandoning it which would mean the reflooding of the mine and the immediate discarding of all the exploration work carried out over more than three years—although no doubt if the company decided to cut its losses a high proportion of these expenditures would rank for tax relief.

This raises the question of the capital so far invested by Rio Tinto. Since there seems to be no question of a major disagreement over any of the points connected with the venture other than its size, some happy arrangement has more than likely been made which is favourable to Siamese Tin.

At present Siamese Tin is carrying on alone in the Glencruff section of the mine and when the technical reports from the independent consultants become available a decision will be made as to the most favourable future course of action. If it appears that it would be advantageous to go into production on a modest scale, a meeting of stockholders will be convened to obtain sanction for such a proposal. Should it look like growing into a fairly large mining proposition the company would seek new partners as there has never been any question of Siamese Tin proceeding with the venture alone on the scale originally contemplated for its development as a joint venture.

From our point of view we feel that this is now essentially a mining question and that further action must await the technical reports from the independent consultants. These reports should give a good idea of the profits to be expected with lead at say, £90 per ton; of the ore reserve position; and, a rough idea of the longer term outlook with regard to the cost of proving ore reserves from additional development work either in the same section of the mine or in another area which may involve dewatering.

Rhokana Raises Final Dividend

Rhokana Corporation, one of the world's leading copper producers and also a holding company of some importance, is raising its net final dividend payment from 35s. to 40s. per £1 unit on its ordinary and "A" ordinary issued capital. With the net interim dividend payment of 10s. per unit already paid the total distribution for the year was 50s. net per unit, which compares with 45s. for the preceding year. Federal income tax at 6s. 3d. in the £1 and Northern Rhodesia tax at 13s. in the £1 have been deducted in arriving at the net figure which is subject to United Kingdom taxation at a rate reduced by a provisional allowance for relief from double taxation.

Profits, subject to tax, have expanded from £8,391,027 to £9,544,021 and take into account the special dividend amounting to £465,342 paid by Mufulira out of its reserves and other net investment income of £3,194,583 against £2,243,594.

Sales during the year were reduced by about 5 per cent owing to the necessity of establishing "pipelines" to customers following the return to free dealings in August, 1953. However, stocks have now been rebuilt and the £400,000 equalization reserve created in 1952 has been transferred to swell the year's profits.

The total amount available was £9,944,021 (£8,391,027) from which £6,250,005 (£5,625,004) was required to service the dividend distribution and £3,550,000 (£2,800,000) was allocated to general reserve.

"Rho-Anglo" Also Pays More

Rhodesian Anglo American, which holds 52 per cent of the Rhokana equity, earned net profits after taxation of £5,104,539 during the year ended June 30, 1954, against £3,913,449 in the preceding year.

In the hands of U.K. shareholders, the final dividend recommended, which is subject to tax at a rate reduced by a provisional allowance for relief from double taxation, is equivalent to 6s. net per 10s. unit. This compares with the previous final payment of 4s. 9d. net per unit, and makes a total distribution for the year of 7s. 6d. net against 6s. 3d. Rho-Anglo in addition to holding 52.396 per cent interest in the ordinary and "A" ordinary stock of Rhokana Corporation, holds a 38.92 per cent interest in Nchanga Consolidated Copper Mines—21.29 per cent by a direct shareholding and 17.63 per cent by virtue of Rhokana's 33.64 per cent interest in Nchanga.

Dividend warrants will be posted on or about December 15. Sir Ernest Oppenheimer is chairman of Rhokana and Rhodesian Anglo American.

R.S.T. and Mufulira Share Issues

Rhodesian Selection Trust, which holds approximately 64 per cent of the capital of Mufulira Copper Mines, has announced its intention of making an issue of ordinary shares in the near future to enable it to take up its proportion of shares that Mufulira Copper Mines is to issue in the near future to raise approximately £2,000,000 to be utilized in financing capital expenditure on items necessary for the further development of the mine, and, in particular, on completing the extension of its electrolytic refinery. The number of shares to be issued by Mufulira and R.S.T. will be announced later.

The new Mufulira shares, it is stated, will be offered to shareholders in proportion to their existing holding subject to a contractual right of the British South Africa Company to subscribe up to 10 per cent of the issue. The shares to be issued will not rank for any dividend paid in respect of the year ended June 30, 1954.

To enable R.S.T. to subscribe its proportion of the Mufulira issue the company proposes to increase its authorized capital to £6,000,000 by the creation of 2,000,000 new shares of 5s. each. It is not expected, however, that all the new shares will be offered in the forthcoming issue.

An extraordinary meeting of R.S.T. will be held in Lusaka on November 17 to consider the new proposals and if the resolution is passed it is intended that the new shares be offered to shareholders registered at the close of business on November 22. The consent of the Capital Issues Committee has been obtained for the issue.

Electrolytic Zinc Earns Record Profits

The Electrolytic Zinc Company of Australasia, whose report is expected to be released about the middle of November, has now issued a preliminary profit statement which shows that a record net profit of £A2,186,840 was earned in the year to June 30 last which compares with £A1,682,889 in the preceding year.

The net profit figure was struck after providing £A750,000 (same) for amortization and depreciation, and £A1,340,000 (£A1,042,000) for taxation. Shareholders participated in the prosperous trading conditions, the dividend distribution on the participating preferences and ordinary being raised to 47½ per cent against 40 per cent in the preceding year. The dividend payments required £A1,425,000 (£A1,200,000).

Other appropriations included £A91,408 (£A179,663) for expenditure on new plant and development at West Coast Mines, £A500,000 (£A250,000) was absorbed for new plant and development at Risdon and after allocating £A150,000 (£A100,000) the carry forward was left slightly higher at £A281,536 compared with £A261,104 brought in.

North Broken Hill's Profit Expansion

North Broken Hill, the big Australian base metal producer, has issued a preliminary profit statement summarizing the company's financial results for the year ended June 30, 1954.

The net profit for the year, after providing for all charges including taxation, expanded to £1,768,087 from £1,600,058 in the preceding year. The amount available was £3,090,814

(£3,367,282), out of which the year's total distribution of 5s 6d. (4s. 6d.) per 5s. share absorbed £700,000, and after providing £75,000 (same) for accrued long service leave, the balance carried forward amounted to £1,395,814 compared with £1,262,282 brought in.

The total ore reserves at June 30 last amounted to 4,616,000 tons as compared with 4,702,000 tons in the preceding year.

Broken Hill South Earns Less

The combined profits of Broken Hill South and Barrier Central Pty. for the year ended June 30, 1954, after providing £A440,100 for taxation and £A143,264 for New South Wales mining royalty, was £A1,278,362, compared with £A1,462,011.

The decline of approximately £A180,000 in the net profit was attributable mainly to lower prices for lead and zinc. The directors point out that the fall in profits would have been greater but for increased production at the mines, lower working costs, and an increase in the company's investment income.

During the year under review the two companies mined 356,113 tons compared with 297,947 tons in 1953. The ore reserve position at June 30 last was conservatively estimated at 1,624,000 tons for Broken Hill South and 302,000 tons for Barrier Central Pty., giving a total of 1,926,000 tons as against 1,987,000 tons at the end of the preceding year.

The company is paying a dividend of 6s. per 5s. stock unit, which absorbs £A960,000. The carry forward at the company's financial year end was £A1,496,203 compared with £A1,932,559 brought in.

Sir Alexander Stewart is chairman. Meeting, Melbourne, October 29.

Sons of Gwalia to Emigrate

Captain A. H. Moreing, Chairman of Sons of Gwalia, the Western Australia gold producer, told shareholders at the company's annual meeting held earlier this week that as gold mining profits in Australia were exempt from taxation it was obvious that the company's domicile must be transferred to Australia. How this should be effected required further consideration, he said. One method would be to transfer the domicile of the existing company, while another would be to form an Australian company to acquire the assets.

Captain Moreing also mentioned that a vigorous development programme was envisaged to maintain the company's improved position and it was possible that additional finance for this purpose might be required. In this connection, the Government of Western Australia has indicated that on certain conditions they are prepared to lend the company the sum of £A100,000. An extract from Captain Moreing's statement at the annual meeting will be found in this issue on page 501.

Messina Raises Final Dividend

Messina (Transvaal) Development Company has recommended the payment of a final dividend of 220 per cent (200 per cent) making, with the interim already paid of 150 per cent, a total distribution of 370 per cent for the year ended September 30, 1954, which compares with a total distribution of 400 per cent on the £325,000 issued capital last year.

Estimated profits of the company and its subsidiaries in South Africa and England were £1,230,000 (£1,296,000) after providing £520,000 (£616,700) for South African Taxation and £5,900 (£2,300) for U.K. taxation and after carrying £400,000 (£90,000) to reserves. The estimated total profit includes £150,000 provision for contingencies no longer required and £102,000 profit on the sale of investments. The preliminary statement added that stocks of ingot copper at cost of production was £59,300 (£258,100). There was a saving of £387,000 for the credit of this company's capital reserve, on the completion of the old company's taxation affairs.

Dominion Reefs to Emigrate to South Africa

During the past week the question of mining companies emigrating to more equitable taxation climes has been brought to notice by the announcement that Treasury permission has been granted to Dominion Reefs (Klerksdorp) to change its residence from the U.K. to South Africa.

This information was contained in the company's September quarterly report which revealed that gold mining continues to be carried out on a limited scale, the resultant slimes being pumped to the existing slimes dam. During the September quarter 14,100 tons were milled, yielding 1,306 oz. gold, which resulted in a working loss, after allowing £1,123 expended

on prospecting the company's adjoining claim area, of £15,443.

By the end of September all work relating to the uranium project had proceeded according to plan and it was hoped that production will begin by mid-1955.

"Tanks" Good Profit Figures

Expectation that Tanganyika Concessions profits for the year ended July 31, 1954, would show an appreciable expansion over those achieved in the preceding twelve months have been confirmed by the results announced in a preliminary profit statement. Anticipation in this case was soundly based, if not a foregone conclusion, as "Tanks" is substantially interested in the big Belgian Congo producer, Union Minière, which has already increased its distribution. "Tanks" is also in receipt of royalty dues which are linked with U.M.H.K.'s dividend payments, so that generally speaking it only remained to estimate what the size of the expected profit expansion would be. In the event, the profit for the year, after all charges including £115,000 (£143,734) for taxation, amounted to £2,504,282 compared with £2,057,914. This result should satisfy the most optimistic as it has enabled the company to step up its total dividend distribution by 10 per cent to 55 per cent. This distribution absorbed £2,107,276 against £1,724,135.

All figures are subject to final audit. Sir Ulick Alexander is chairman. Meeting, Salisbury, S. Rhodesia, January 20, 1955.

Benguela Railway Earns More in First Nine Months of 1954

The Benguela Railway Company, of which Tanganyika Concessions holds 90 per cent of the equity and all the debentures, has announced net operating receipts in respect of the first nine months of 1954 of Esc. 120,531,948, which compares with Esc. 90,397,658 in the corresponding period of 1953.

Mining News From Australia

Some interesting information has recently been received from our Australian correspondent regarding operations and development in progress at certain mining companies in Australia. These include Aberfoyle Tin, the Commonwealth's largest tin and wolfram producer, Great Western Consolidated, a subsidiary of the Western Mining Corporation, Central Norseman Gold Corporation, and the Hill 50 Gold Mine:—

Aberfoyle Tin.—This mine is the Commonwealth's largest tin-wolfram producer. Ore reserves are estimated at 287,857 tons of proved ore and 44,448 tons of probable ore. Output last year was 52,875 tons of ore from which 1,077 tons of concentrate were recovered. Development prospects are good, and the main shaft is being sunk to open up four new levels, and the purchase and erection of new plant will be an important item in the present year's operations. To date, the company has paid £A1,793,817 in dividends.

Great Western Consolidated.—Operations of this offshoot of W.M.C., working in the auriferous belt between Bullfinch and Southern Cross, Western Australia, have been disappointing. The grade of the open cut ore, which in the early stages must form a substantial part of the ore milled, has been below anticipation; grade of ore milled has been from 2.0 to 2.3 dwt. per ton, with a production rate of about 32,000 tons of ore per month, but costs have been kept at a remarkably low level, and the Company has been able to meet working expenditure from revenue.

The long range view is satisfactory and is improving. Higher grade ore is being opened up in the lower levels of the Copperhead (the main mine) at Bullfinch, and development of the No. 8 level, at which the uppermost of the higher grade ore occurs, will be well advanced within the next 12 months, as well as the lode below this horizon. The main shaft is now 1,800 ft. deep.

Recently, diamond drilling has been carried out at the Fraser's line of lode at Southern Cross; results appear to have been satisfactory, and a recent statement by the company advises that this mine will be unwatered, and that sufficient development will then be completed to bring ore production into sight. Meantime, drilling is proceeding on other leases between Bullfinch and Southern Cross.

Central Norseman Gold Corporation.—This important mine continues the high grade producer in the W.M.C. group, and a very pleasing feature is the continued successful development work at the lowest levels of the Regent Shaft workings. Recent reports advise that driving at No. 32 level was in ore averaging 8.0 dwt. per ton for 20 ft. and a width of 48 in., and 12.8 dwt. for 17 ft. over a width of 74 in.

At the Royal Shaft, driving at No. 8 level was in ore worth 6.1 dwt. over 84 in., and at No. 7 level, an advance of 49 ft. averaged 24.8 dwt. over 48 in. This section, the old Princess Royal mine, has opened up very well and has a very attractive future; the same can be said of the deep workings in the adjoining mine, worked from the Regent Shaft, and in this section exploratory work has pointed to the existence of another series of shoots to the north, at considerable depth.

With the recommendation, just announced, of a further dividend of 9d. plus a bonus of 9d. making a total of 1s. 6d. (Australian) per share on the issued capital of £650,000 in 5s. shares, Central Norseman's distribution, so far, for the year ending March 31, 1954 is 3s. a share. Unless, therefore, another dividend is recommended it appears that the total distribution will be held at last year's level of 3s. a share.

Hill 50 Gold Mine.—At Mount Magnet, W. Australia, the Hill 50 has been steadily improving output for 12 months or more, and is making a bid for the position of Australia's richest gold mine. Formed in 1934, the mine average for a number of years was 4 to 5 dwt. gold per ton, on an output somewhat more than 2,000 tons of ore per month. Later, exploration below the 400 and 500 ft. levels was encouraging, and diamond drilling from 1950 onward, located good ore, one particularly rich borehole causing a strong revival in prospecting at depth on the field, which is still in progress. The rich ore located in the Hill 50 mine, occurs in a rather intense dragfold below a depth of 700 ft., and 20 oz. ore was cut in the borehole at a depth of 1,060 ft. With the development of ore of steadily increasing grade, mill capacity has been increased to about 8,000 tons of ore per month, and the average grade now milled is 13 dwt. per ton. The new level was planned at the horizon of the rich intersection, and the main crosscut has been completed. The eastern wall of the lode has been met at 233 ft. from the shaft, the true width of the lode being 73 ft. and the average assay value 50 dwt. How far this high grade ore will continue north and south has yet to be proved. The payable length of lode at the next upper level, 820 ft. is between 300 and 400 ft.

Tin Returns—September

Returns for September in respect of Malayan, Nigerian and other tin producers are given in the table opposite.

Of more than general interest to the tin industry in Malaya is the report and accounts for the Perak River Hydro-Electric Power Company, which has now been published for the year ended July 31, 1954. This organization—aptly described by Mr. Hugh G. Balfour, the chairman, as "The engine room of the tin industry in the Kinta Valley"—made increased profits last year at £1,449,571 as compared with £1,385,190 previously. After expenses, depreciation, and taxation however, net profits rose from £159,117 to £233,651. Total distribution made on the company's issued ordinary capital of £1,750,000 in shares of £1 each was increased to 10 per cent as against 6 per cent in respect of the preceding year. While a more detailed account of the company's operations during the past financial year will be given in the chairman's statement which will be circulated before the Annual General Meeting to be held in London on November 5, it is now disclosed that the total units of electricity sold last year reached a record figure of 335,143,943.

The report and accounts covering the year ended December 31, 1953, have also been received in respect of South Bokeru Areas, the Northern Nigerian tin and columbite producer. Total revenue earned by the company rose to £47,180 as compared with £38,891 previously. After Nigerian expenditure of £40,527 as against £33,319 together with taxation of £2,200 as compared with £1,150, net profit was £989 as against £1,000. A dividend of 16½ per cent was paid on the issued ordinary capital of £25,001 in 2s. shares as against 10 per cent for the previous year. No final dividend has been recommended. The increased distribution had the effect of reducing the amount carried forward to £3,319 from £4,160 previously. In respect of the current year an interim distribution of 33½ per cent has already been made. As was pointed out in a circular to shareholders last May these two payments together amount to a gross sum equal to one-half of the company's share capital. It will be remembered that a return of funds to shareholders was promised by the new board prior to its election last December.

A preliminary statement from Rantau Tin Dredging, shows that the net profit earned during the year to June 30, 1954, fell to \$633,184 as compared with \$1,686,185 previously. A dividend of 30 c. per share less 30 per cent Malayan Income Tax has accordingly been recommended and marks a sharp fall from 70 per cent paid in respect of the previous year. Production of tin ore by this company which last year fell to 782½ tons as against 999½ previously has shown some recovery during the first three months of the current financial year towards levels achieved during 1951-52 and 1952-53.

SEPTEMBER TIN OUTPUTS IN TONS OF TIN CONCENTRATES

Company	Sep.	Month since year end	Financial Year to Date		Company	Sep.	Month since year end	Financial Year to Date	
			This	Last				This	Last
EASTERN					EASTERN				
Ampat.	117½	9	886½	931	Tambah	14½	9	178½	74½
Anglo-Burma*	30	3	30	42	Tanjong	58	9	555½	623½
Ayer Hitam*	527½	3	527½	130½	Tekka	32½	6	68½	69½
Batu S. a.	3	12	215½	195	Tekka T.*	58	12	393	229½
Berjuntai	66	5	301½	241½	Temoh*	43½	3	434	17½
Chenderiang*	54½	6	93½	50	Tongkah	36½	3	132	96½
Gopeng Cons.*	155½	12	563½	585½	Tronoh*	606½	9	2098½	1487½
Hongkong Tin*d	3½	12	152½	312½					
Idris Hyd.*	63½	9	194	181	NIGERIA				
Ipho Tin	39½	6	293½	204½	Amal. Tin	326	6	1991	1874
Kamunting	81½	6	564	647½	Amal. Tin†	47	6	283	323½
Kent (F.M.S.)*	80½	9	264½	324½	Bisichi	66	9	448	370
Kepong*	66½	3	66½	70½	Bisichi†	34	9	200	134
Killinghall*	156	12	595½	286	Ex-Lands	40	9	433	440
Kinta K.	23½	6	144½	143½	Gold & Base	46	9	353	415
Kinta T.	32½	9	241½	250½	Gold & Base†	18	9	100½	65½
Klang River	24	6	181½	240	Jantar	16	12	198	212
Kramat	37½	6	127	—	Jantar†	20	12	216	210
Kuala K.	253	6	1269½	941½	Jos Tin	14½	2	28½	26½
Kuchai	44½	12	346½	451	Kaduna P.	7½	9	55	86½
Larut	119½	9	872½	409	Kaduna S.	44½	9	265	264
Lower Perak b.	131	5	832½	342	Keffi	11	6	61	13½
Malayan Tin*	422½	3	422½	648	Keffi†	42	6	212½	414
Malaysiam	9½	6	63½	46½	Lond. Nig.	24	6	145	139½
Pahang	220	2	440	440	Lond. Nig.*†	3	6	7½	—
Pengkalan*	136½	12	535½	320½	Naraguta Ex.	11½	9	53½	54
Petaling*	390½	12	1520½	1878½	Naraguta K.	22½	9	131½	110½
Puket Tin*	191½	9	499½	219½	Naraguta T.	22½	9	152½	174½
Rahman H.	33½	3	105½	127½	Naraguta T.†	7	9	60	40
Rambutan*	62½	3	62½	21½	Ribon	10	6	55	63
S. Tronoh*	68	3	175½	148½	S. Bokeru	4	9	56½	55½
Rawang Conc.	17½	6	289	375	S. Bokeru†	—	6	2	—
Rawang Tin	37½	6	260½	—	Tinfields of Nig.	3½	6	14½	15½
Renong	100½	3	327½	228½	Tinfields of Nig.†	2½	6	14½	—
Selayang Tin*	61	12	225	167½	U. Tin	12	3	36	27
S. Kinta	306½	6	2355½	2101½	U. Tin†	—	3	0.45	0.85
S. Malayan*	728½	3	728½	651½					
Siamese Tin	151½	9	1398½	1424½	MISC				
S. Tronoh*	376	9	804½	121	Beralat Tin	5	6	29	47
Sungei Besi*	310½	6	579	536	Beralat Tin†	180	6	1014	1116
Sungei Kinta	—	9	132½	188½	Geevor	53	6	305	328
Sungei Way*	316½	3	316½	282	Sth. Crofty Tin	50	9	438½	401½
Taiping	60½	9	500½	—	Sth. Crofty Tin†	1½	9	7	—

* Quarterly

† Columbite

‡ Wolfram

§ Figs. for Aug. quarter

a Dredge closed down on September 18, 1954, having exhausted the ore reserves

b Dredge No 2 resumed working on September 12, 1954

c Closed for repairs

d Dredge has been digging its own dock for six months, production re-commence in September

Mining Men

Mr. D. G. W. Acworth, manager of the export department of The General Electric Co., and a director of the Anglo-Argentine General Electric Co., has been appointed a director of each of the overseas companies of the G.E.C. in Australia, New Zealand, South Africa, Central Africa, India, Pakistan, Burma, Malaya, Hong Kong and Canada.

Mr. Lou's Alfred Bushe has been appointed a director of Apex (Trinidad) Oilfields.

Mr. W. Watson Connor has been appointed a director of Halkyn District United Mines in place of **Mr. L. B. Robinson**, who has resigned.

Sir G. S. Harvie-Watt, Bart., has been appointed a director of Lake View and Star.

Mr. S. G. T. Knott has been appointed a director of The Anglo-French Exploration Company. Mr. Knott will, however, continue as secretary of the company.

Mr. J. R. Quartier, who was elected vice-president of the British Compressed Air Society this year, has joined Consolidated Pneumatic Tool Company at their head office in London.

Mr. R. S. G. Scott has been appointed chairman of Siamese Tin Syndicate in place of Mr. K. O. Hunter who has resigned.

Mr. E. Waterworth has retired from his position as chief buyer for the B.T.R. group of companies after more than 40 years of service.

Messina (Transvaal) Development Company have taken over the management of Rhodesia Copper Ventures and **Commander H. F. P. Grenfell** has been appointed chairman and **Mr. P. O'B. Frost** a director of the Rhodesian company.

NORTH KALGURLI (1912) LIMITED

The Annual General Meeting of North Kalgurli (1912) Limited was held at Winchester House, London, E.C.2, on Wednesday last.

Mr. C. T. Ley (Chairman) who presided, in the course of his speech said:—

The profit before taxation for the period amounts to £135,775 against £106,005 for the previous year of 1952, when £13,002 was written off mining costs and £7,849 for stores obsolescence, etc.

After making allowance for the United Kingdom Profit and Income tax, it is possible to recommend the payment of a final dividend of 7½d. per share, less tax at 9s. in the £, which is the same equivalent allowing for the 100 per cent script issue between the interim and final dividend, as was paid last year.

The year under review is the first full period in which the effect of the New Shaft is apparent in the year's performance and costs. There has been a substantial increase in the output per manshift in the Mine, and mining costs for 1953 at A.38.70s. show a reduction of A.5.99s. compared with the previous year. This reduction was achieved despite continued, though smaller, increases in the basic wage and in the price of materials.

Ore treated at 253,967 tons was 15,802 tons greater than in 1952. Ore reserves, Positive and Probable, estimated at 2,265,193 tons are greater by 30,778 tons than at the end of the previous year, though the assessed grade is slightly lower.

Treatment costs were A.29s. lower than in the previous year and total operating costs (including depreciation charges) showed a decrease of A.6.28s. per ton.

REDUCED OPERATING COSTS

It will be seen that the reduced operating costs have compensated in no small degree for the reduced revenue received from the premium on gold sold on the free market through the Gold Producers Association, and have enabled the Company to maintain its profit, in spite of the slightly lower grade of ore treated. There is ample justification for the programme of Capital Expenditure pursued over the last few years.

Further expenditure will be necessary to complete our programme of increased production from 18,000/20,000 tons a period to 28,000/30,000 tons a period, which is our objective.

Judging by the results just mentioned, it should—when completed—be the means of bringing increased benefit to us all.

Our treatment plans have taken longer to mature than was at first anticipated, as it was found necessary to wait for some stability in the Country's economy and cost of living, before attempting to count the cost of erecting expensive new machinery. There are signs that this stage is now being reached.

Operations on the Mine have now made steady progress. Footage of development at 10,805 ft. was greater than in the previous year, and the ore disclosures resulting therefrom must be regarded as very satisfactory.

The operation of the New Shaft provided facilities, not available previously, for commencement of development of the Eastern series of ore bodies below the No. 8 level, which was previously the lowest level of the old North Kalgurli Shaft, and of the Western or Main Lode series in their Northern Extensions.

Work on the Eastern series was concentrated chiefly on the No. 9 level and development carried out during 1953 and 1954 since the close of the period indicates that the ore prospects on this horizon will not be less than the levels above. No work has been done on the Eastern series below No. 9 Level but the Tyrrell Lode—a counter formation occurring between the Eastern and Western series—has been fully exposed on No. 10 level and partly developed on Nos. 9 and 11 levels. Recently on the No. 11 level the North Drive 48 ft. East has had to be stopped as the ore terminated in a fault. Specimen ore was being obtained from the leading stope which was commenced at the North end of the ore body. Pay runs on the No. 9 and No. 10 levels were 65 ft. averaging 9.7 dwt., and 180 ft. averaging 7.2 dwt. respectively.

Recent developments on the Western series, i.e., the Main West Lode, West Branch Lode and East Branch Lode on the No. 13 level have been very satisfactory disclosing at this—the deepest horizon of exposure—substantial widths of better than average grade ore.

The South Drive 347 ft. West on the No. 13 level has been advanced a total length of 218 ft. Payable ore was met at 41 ft. South and averaged 9.8 dwt. From 158 to 202 ft. the drive was stripped to a width of 16 ft. averaging 12.1 dwt.

In the Kalgurli Section, the Iron Duke South Lode was developed on Nos. 6 and 8 Levels. Work carried out since the close of the period gives promise of better than average shoots in this section.

The percentage of development in payable ore for 1953

was 30 per cent. In considering this figure it must be appreciated that the ore resources of the Kalgurli field comprise a large number of comparatively small ore bodies, and much development through unpayable ground is necessary to expose the payable sections. In these circumstances the figure of 30 per cent is not unsatisfactory.

An average footage of approximately 650 ft. per period was maintained during the year, and in diamond drilling it was applied chiefly as a guide to development. In cases where ore has been intersected some have been investigated at once by driving and cross cutting while others remain as development objectives for future work.

START ON POMEROY SHAFT

During the present year a start has been made on the Pomeroy Shaft in the Oroya North Block lease—I wonder how many shareholders remember Mr. Pomeroy as a Director of this Company—The concrete pillar blocks for the legs are ready and erection of the old North Kalgurli headframe and winder is starting almost immediately, and in due course the Oroya North Block Lease will be thoroughly tested for the famous Oroya Shoot which was never satisfactorily accounted for in this lease. Those of you who are interested should read up the history of this rich shoot. The Oroya Shoot according to Dr. Stillwell in his "Geology and Ore Deposits of the Boulder Belt Kalgoorlie" published in 1929, has been one of the most remarkable ore bodies ever known on account of its richness and length. It outcropped at the north end of the old Brown Hill lease and pitched southerly at an angle of 14 deg. After a horizontal distance of 1,475 ft. it entered the old Associated Northern Lease (now worked by Gold Mines of Kalgoorlie), below the 200 ft. level. It continued for 850 ft. through the Associated Northern and entered the Oroya North Block at 700 ft. above sea level. It passed through the Oroya North Block with a steeper pitch and entered the Associated Lease about 274 ft. above sea level. It then continued in the Associated Lease with a flatter pitch for about 1,100 ft. when finally the shoot which had become low in value was lost. The total horizontal length was 4,350 ft. or 4,600 ft. when measured along its pitch, with two breaks in continuity—one of 120 ft. in the Oroya North Block—and one of 200 ft. in the Associated. The total length of the pipe that has been mined is thus 4,280 ft.

I expect shareholders will wish me to say something about the acquisition by Gold Mines of Kalgoorlie of South Kalgurli Consolidated and Boulder Perseverance inasmuch as it affects this Company. The change of ownership should not, as far as I can see, have any adverse effect on this Company, and may be a benefit to us.

South Kalgurli and Boulder Perseverance under the control of Gold Mines of Kalgoorlie will still retain their part interests in both the Croesus and the Kalgurli Ore Treatment Companies, and except for some change of Directorships these Companies will continue to function exactly as before.

The change of ownership however has afforded an opportunity for our Managers to meet and overhaul the organization of both these plants, and consider if any useful changes could be introduced for the benefit of both parties. Talks on these lines have already begun and we hope benefit may result.

Disappointment has been expressed both in Australia and in this Country that means had not been found for South Kalgurli to amalgamate with North Kalgurli, as the two Companies have worked together in close association for so long.

Early this year, following negotiations that had been going on between us for some time, the Directors of South Kalgurli offered, subject to the approval of their shareholders, to sell us their Australian assets at an agreed price to be satisfied in North Kalgurli shares. We accepted their offer, and a draft Agreement was drawn up and initialled, and we obtained the consent of the Treasury to make an issue of shares to satisfy the purchase price. At this stage South Kalgurli told us without any warning that they had had better terms offered them by Gold Mines of Kalgoorlie and they called off the deal. I understand that Gold Mines of Kalgoorlie had no knowledge of any negotiations going on between ourselves and South Kalgurli.

On looking forward there appears to be signs of many prosperous years ahead of us. In the first place we trust that full production will bring us increased profit. Next that there is a reasonable chance of taxation which has for long borne so heavily on this Company, being reduced. And finally there is always the hope of an increase in the price of gold.

I should like to mention here that in future the Company's financial year will be taken to the end of March instead of the end of December as at present. This step is being taken to assist the accountants.

The report and accounts were adopted and a vote of thanks to the Chairman for presiding, also to the staff in Australia terminated the proceedings.

SONS OF GWALIA, LTD.

The fifty-seventh annual general meeting of the Sons of Gwalia, Ltd., was held on October 26, in London.

Captain A. H. Moreing, Assoc.M.Inst.C.E., Chairman of the Company, presided.

The Chairman in the course of his speech said:—

The shortage of labour made it impossible to maintain even the reduced production and carry on a full programme of development. Fortunately a diamond drilling campaign had located values in the Hanging Wall and as these orebodies could be reached with a minimum amount of work it was decided to concentrate on developing them. These hanging wall orebodies contributed a fair tonnage of high grade ore but unfortunately did not make any major contribution to the ore reserves. Further drilling has revealed extensions of the orebodies in the upper levels.

You will have seen from Mr. K. F. Finucane's Summary of Report that he considers the chances of profitable development in depth to be good and the Report of your General Managers indicates the capital expenditure required to put the mine and its plant into first class condition and to develop the 32 Level. An important factor in maintaining an adequate and contented labour force is the provision of proper housing and amenities.

You will have noticed from the Directors' Report that profits derived from gold mining in Australia are exempt from taxation and, this being so, I think you will agree that it is obvious that the domicile of the Company must be transferred to Australia. Whether this should be done by transferring the domicile of the existing Company or by the formation of an Australian Company to acquire the assets, is a matter which requires further consideration and is being studied by the Board, and I hope that at an early date we shall be able to submit our proposals under this head to you.

I am glad to say that recently as has been reported in the usual Press notices there has been considerable improvement in the tonnage mined and the gold produced with a consequent improvement in the working profit, but I must warn you that this improvement, though most gratifying, may not continue for any length of time unless a vigorous programme of development is undertaken and that neither must it be taken that additional finance will not be required.

The Government of Western Australia, to whom our best thanks are due, has indicated that on certain conditions they are prepared to lend the Company the sum of £A.100,000 and I would like, on your behalf, to thank the Minister of Mines and the Government for their kindness.

The report and accounts were adopted.

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MR. DONALD W. THOMAS'S REVIEW

The Thirty-fourth Ordinary General Meeting of Tekka, Limited was held on October 22, 1954 at the Registered Office, Redruth.

Mr. Donald W. Thomas (Chairman) presided.

The Reports and Accounts for the year ended March 31, 1954 having been circulated for the prescribed time, were taken as read, as was also the Chairman's Statement, circulated with Accounts, which was as follows:—

This is the first time since my appointment as Chairman of the Directors of this Company that I have circulated a Statement to Shareholders with the Annual Report and Accounts. Last year I was on my way to Malaya and I was obliged to my alternate, Major W. E. Hosking, for preparing the Chairman's Annual Statement.

During my stay in Malaya I visited your property and had the benefit of talks with our General Managers as to the future of your mine.

During the financial year ending March 31, 1954, 149.43 tons of tin ore were recovered from 506,400 cubic yards of ground treated; this compares with the 1952/53 production of 109.24 tons from 482,400 cubic yards. The profit for the year after providing for taxation is £16,962, as compared with a figure of £16,105 in the previous year. Provision for United Kingdom and Malayan taxation absorbed £16,142, in addition to which £10,625 was paid by way of royalties to the Malayan Government, making a total contribution to Government funds of £26,767. Three interim dividends, two of threepence each, and one of sixpence, were paid to shareholders on account of the profits for the year absorbing, after taxation, £9,861.

The Report of our General Managers, Messrs. Osborne and Chappel, circulated with the Report and Accounts, gives particulars and comparative results at the Mine. The output for the first five months of the current year was 55½ tons of tin ore and is in conformity with the statement of the General Managers that no appreciable change in the overall production is expected during the current year. The average price of tin during the year under review was, for the major part, much lower than in the previous year, but the price has since recovered and the margin between costs of production and the sale of the product is a more comfortable one.

Shareholders will know that the International Tin Agreement has received general support and now awaits ratification by the producing and consuming countries concerned. Assuming ratification all round, one hesitates to forecast what the effect will be on the tin mining industry in Malaya, but I feel I should repeat a statement I made in an Annual Report recently in connection with another Company, that the possible repercussion on domestic affairs of individual mines may mean dividends on a lower standard than has obtained during the past years.

The security position has improved and this has permitted reduction in the number of resident Special Constables at the Mine. It will be noted that our General Managers state there were no incidents on the property, but that the Communist terrorists were active in the vicinity. The Directors record their thanks to the General Managers and the Manager and Staff at the mine for their loyal service under conditions which are still fraught with difficulty.

The Statement of Accounts and Balance Sheet, together with the Directors' Report, were received and adopted.

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The Mining Journal

ANALYSIS OF RAND AND O.F.S. QUARTERLIES

SEPTEMBER QUARTERLIES SIGNPOST FUTURE DEVELOPMENT ACTIVITIES IN THE ORANGE FREE STATE

A good deal of the magic and some of the glitter exclusively associated with the developing mines in the Orange Free State vanished during the September quarter. This is not to say that the interest focused on the O.F.S. quarter by quarter ever since St. Helena and Welkom joined the list of gold producers in the closing months of 1951 has fallen away completely.

But rather that enthusiasm during the past three months over-reached itself and this, coupled with the realization that many of the established producers were showing signs of definite improvement, has broadened enquiry to include more of the mines in the Far West Rand, several of the old established Rand producers and, not least, those mines now showing bigger profits from uranium as well as gold.

This is a healthy sign but it must become a much more prominent feature in the months ahead if the South African gold share market is to wean investment funds away from the industrial market which has been buoyant for several months. Marketwise, it is essential that Kaffirs as a whole show signs of reviving so that confidence in the industry rather than in a few selected companies can attract the potential investor.

Certainly, the industry is moving towards popular recognition again after its long spell in the doldrums. The problem of financing the Orange Free State mines has been solved; the hitherto chronic shortage of power and labour supplies, which curtailed development programmes and restricted crushing rates, is improving rapidly; while labour costs—particularly on the Rand—have shown a general downward trend over the last six months. This generally healthier position has not yet been fully reflected in the production and profit returns, but if the normal seasonal improvement in the labour supply position during the next six months eventuates to swell the total labour force above its present figure of 305,000, the effect, especially on the older mines, should be perceptible. The O.F.S. mines are in a somewhat different position. None of the mines are operating at full capacity, the grade of ore, generally speaking, is much higher than on the Rand, and the scope for mechanization is much greater so that even though additional labour is still needed, working costs will, in any event, decline as production expands.

Taken as a whole, the South African gold mining industry is in better fettle than it has been for some years. The current rate of production at 1,143,709 oz. in September is equivalent

to an annual output of approximately 13,725,000 oz. which is close to the all time record of 14,000,000 oz. attained in 1941. This expansion has been helped materially by the increased scale of operations in the O.F.S. which contributed 118,044 oz. in September as compared with 99,896 oz. in the preceding month.

As an experiment, we are on this occasion publishing our usual tables analysing the Rand and O.F.S. quarterly gold mining returns as a separate loose-leaf supplement. It has been our experience that many readers have been making a practice of cutting out these tables for easy reference, and we hope that this new arrangement may prove to be a convenience to those not wishing to mutilate their file copies of the Journal.

Also as an experiment, we are reprinting in this supplement, for ready reference, the quarterly returns of those Groups whose returns have already been published in an earlier issue of *The Mining Journal*. Our own quarterly tables can only present the cumulative quarterly results for each producing mine compared with the corresponding cumulative position a year ago. These tables are thus essentially complementary to the data published in the Group's quarterly reports in that the latter give only the results for the past quarter, of which the identity is lost in our own cumulative figures, while our tables give the cumulative and comparative position which readers would otherwise have to compile for themselves by going back over the Group's published quarterlies over the past couple of years.

It will, of course, be realized that our tables provide no information with regard to developing mines—i.e., those mines which have not yet commenced to make milling returns. In these cases, readers who are maintaining their own progressive records of development results may find an added convenience in having the Group's quarterly results reprinted in this supplement.

We would appreciate receiving readers' comments on this new arrangement, together with suggestions for further improvements in this service.

Be all that as it may, the Kaffir market still awaits some spectacular results from the O.F.S. to set it advancing along a broad front. The possibility that these will be forthcoming in the near future appear bright. Indeed, there are several potential sources from which unusually interesting news is awaited.

The chief pressure point on which expectations are centred is the area around the common boundary of Free State Geduld and Western Holdings. Anticipation here of extraordinary results is of long standing and is reasonably based. For it was in this area that the two drill holes sunk in 1946 yielded values of 23,037 in. dwt. and 12,528 in. dwt. respectively. At present, Western Holdings is advancing its main haulage on level 41 northwards towards the common boundary, and in the September quarterly report issued by this company, it was announced that at a point 500 ft. distant from the boundary the Basal Reef was intersected and developed over a length of 79 ft. Of this footage 70 ft. were

sampled all of which proved payable and gave an average value of 99.3 dwt. per ton over a reef width of 15.73 in., equivalent to 1,562 in. dwt. This is rich by any standards and enthusiasm will undoubtedly run high in advance of the announcement concerning the payability values over the remaining 500 ft. Yet, it may be three months or more before this footage can be achieved but in that case it would not be out of the question to expect further glimpses of the expected rich reef formation here by means of additional cross-cuts and box-holes as was undertaken earlier in the year.

QUESTION MARK OVER F.S. GEDULD

Free State Geduld, it is hoped, will speed up her development work underground in the months ahead. This mine has always been considered as exceptionally promising and a good deal more in the way of high grade values exposed over a substantial footage is required to justify its present price level. To date, only 2,255 ft. have been sampled from less than 60,000 ft. driven and while the percentage reef payability and the grade

(Continued on page 4)

FINANCIAL RESULTS

(Cumulative and Comparative "this" financial year to September 30, 1954 with "last.")

GROUP	COMPANY	ORDINARY SHARES IN ISSUE	Months since year end	PROFIT AND LOSS RESULTS £(000)										Current Financial Year's Capital Expenditure (Gold)	EARNINGS, DIVIDENDS AND YIELD PER SHARE						
				Working Profit		Premium Revenue		Uranium Profit		Taxation and/or Mining Lease		Net Profit After Tax**			Earned in current year to date††	Paid				Yield on Price 25/10/54 (o/o)	
																1953-54		1952-53			
				This	Last	This	Last	This	Last	This	Last	This	Last			June s. d.	Dec. s. d.	June s. d.	Dec. s. d.		
Gold Fields	D'fontein.....	9,828,000 (10/-)	3	245.9	—	—	—	—	—	—	—	245.9	—	99.4	6d.	—	—	—	—	—	
	Libanon.....	7,937,300 (10/-)	3	151.6	127.4	—	7.3	—	—	—	—	151.6	134.7	72.6	5d.	3	3	3	3	5.0	
	Luipaards Vlei.....	4,969,105 (2/-)	3	134.8	126.9	—	7.6	—	—	—	—	134.8	134.5	19.1	6½d.	7½	7½	7½	7½	5.5	
	Rietfontein C.....	1,122,252 (5/-)	9	212.5	227.4	—	11.4	—	—	102.9	115.9	109.6	122.9	6.6	1/11½	1 3	1 4½	1 3	1 4½	14.0	
	Robinson Dp.....	2,000,000 n(7/6)	9	232.6	118.3	—	34.4	—	—	100.1	2.2	132.6	150.5	24.1	1/4	1 3	9	9	9	9.5	
	Simmer.....	6,750,000 (2/6)	9	109.1	115.2	—	36.4	—	—	5.7	7.8	103.5	143.8	24.3	4d.	3	4	4	4	11.3	
	Sub Nigel.....	1,771,875 (10/-)	3	284.1	311.6	—	8.6	—	—	141.4	154.9	142.7	165.5	3.0	1/7	3 9	3 9	4 0	4 0	18.2	
	Venterspost.....	4,900,000 (10/-)	3	184.9	168.5	—	10.6	—	—	48.8	36.3	136.1	142.8	80.6	6½d.	5	5	5	5	6.3	
	Vlakfontein.....	6,000,000 (10/-)	9	642.0	643.6	—	24.9	—	—	228.2	250.0	413.9	418.5	155.2	1/4½	6½	6½	6½	8	6.0	
	Vogels.....	5,028,571 (10/-)	9	982.6	887.0	—	47.2	—	—	186.4	327.4	796.3	606.8	21.9	3/2	1 6	1 1½	1 1½	1 0	7.6	
W. Drie.....	7,041,080 (10/-)	3	907.7	745.2	—	12.5	—	—	261.8	240.0	645.9	517.7	266.5	1/10	1 3	9	6	—	1.5		
Anglo American	Brakpan.....	4,600,000 (5/-)	9	122.0	200.0	—	43.5	—	—	10.7	48.0	105.7	195.5	3.1	5½d.	4½	6	6	9	10.0	
	Daggas.....	7,000,000 (5/-)	9	285.9	2982.9	—	97.2	617.6	348.0	1325.6	1524.0	2148.4	1904.1	66.6	6/2	3 0	3 0	3 0	3 0	8.7	
	East Daggas.....	3,730,000 (10/-)	9	419.8	437.2	—	31.9	—	—	186.9	215.6	230.1	253.5	2.3	1/3	9	10½	9	1 0	13.0	
	P. Brand B.....	13,000,000 (5/-)	9	134.4	—	—	—	—	—	—	—	134.4	—	2105.3†	2½d.	—	—	—	—	—	
	P. Steyn c.....	9,776,700 (5/-)	9	164.2	—	—	—	—	—	—	—	164.2	—	575.7	4d.	—	—	—	—	—	
	S.A. Lands.....	2,475,000 (3/6)	9	491.1	462.2	—	36.0	—	—	207.1	206.4	284.2	291.8	11.9	2/3	1 3	1 6	1 3	1 9	11.5	
	Springs.....	10,110,000 (5/-)	9	69.0	94.7	—	40.7	—	—	4.4	8.4	64.8	127.0	4.2	1½d.	—	1½	1½	3	3.8	
	Welkom.....	10,000,000 (5/-)	9	49.2	110.3	—	21.7	—	—	—	—	49.3	132.0	379.4	1d.	—	—	—	—	—	
	W. Holdings.....	7,496,376 (5/-)	9	584.7	30.0	—	4.0	—	—	—	—	584.8	34.0	573.8	1/6½	—	—	—	—	—	
	W. Reefs.....	7,000,000 (5/-)	9	584.9	720.6	—	44.4	516.4	—	3.1	—	1101.5	765.0	311.0†	3/2	1 3	1 3	1 3	1 3	5.2	
Central Mining	Blyvoor.....	24,000,000 (2/6)	3	1432.2	1504.1	—	—	167.3	94.9	842.2	761.3	760.7	864.8	73.6	7½d.	1 2	1 4	1 4	1 6	7.4	
	City Deep.....	2,026,832 (£1)	9	145.3	196.3	—	58.8	—	—	5.7	7.4	184.7	269.2	58.4	1/10	6	6	6	1 0	6.4	
	Consol M.R.....	1,247,602 (£1)	3	91.7	58.5	—	9.8	—	—	35.9	7.0	59.8	65.0	7	1½d.	1 9	1 9	1 9	2 3	16.7	
	Crown Mines.....	1,886,125 (10/-)	9	448.1	362.1	—	80.1	—	—	45.8	13.2	511.1	457.2	20.9	5/5	3 0	3 0	2 6	2 6	13.7	
	Durban Deep.....	2,325,000 (10/-)	9	413.6	581.8	—	58.8	—	—	CR20.8	129.0	464.7	529.8	119.9	4/-	1 6	1 9	1 9	2 0	10.2	
	E. Rand Prp.....	3,960,000 (10/-)	9	1108.6	985.2	—	4	78.4	—	280.0	232.9	878.7	897.6	300.3	4/5	1 9	1 9	1 9	2 6	7.5	
	Harmony d.....	15,642,780 (5/-)	3	32.1	—	—	—	—	—	—	—	20.8	—	874.2	—	—	—	—	—	—	
	Modder B.....	2,800,000 (2/-)	9	23.5	14.8	—	11.6	—	—	3.5	3.3	40.0	33.7	—	3½d.	—	—	—	—	—	
	Modder E.....	930,805 (£1)	3	38.0	46.6	—	5.2	—	—	12.0	14.8	28.1	39.6	—	7d.	1 6	1 6	1 6	1 6	17.2	
	New Modder.....	2,800,000 (3/6)	3	2.3	3.27	—	6	—	—	1.0	4	3.3	4.24	—	—	—	—	—	—	—	
Rose Deep.....	700,000 (17/-)	9	105.1	74.7	—	22.0	—	—	21.4	8.3	101.3	93.2	6.9	2/11	—	—	—	—	—		
T'vaal G.M.E.†	852,500 (£1)	9	7.3	18.6	—	10.2	—	—	3.6	2.99	33.0	49.7	23.5	9d.	6	9	6	9	—		
Welgedacht.....	1,358,030 (10/-)	3	5.0	10.6	—	1.8	—	—	—	—	3.7	11.0	—	½d.	—	—	—	—	—		
J.C.I.	E. Champ. d'Or.....	2,079,000 (2/6)	9	1195.1	—	7.4	167.0	—	—	—	3.0	L 27.5	8.1	—	—	—	—	2	3½	—	
	Freddies Cons.....	16,359,913 (£1)	9	1629.9	—	—	—	—	—	—	—	672.4	—	828.4	—	—	—	—	—	—	
	Govt. G.M.A.....	5,600,000 (5/-)	9	251.3	416.5	—	62.7	—	—	27.5	94.4	252.5	448.3	285.4	11d.	7½	9	1 0	1 0	11.0	
	Randfontein.....	4,063,553 (£1)	9	1534.1	191.6	—	3	74.1	781.0	—	—	268.2	320.0	4	1/4	1 0	1 0	1 0	1 0	2.8	
Union Corporation	East Geduld.....	9,000,000 (4/-)	9	2760.4	2734.7	—	5	76.9	—	1510.1	1523.9	1291.4	1326.2	15.1	2/10½	1 9	1 9	1 9	2 1	12.3	
	Geduld Prop.....	1,460,857 (£1)	9	253.4	288.3	—	2	29.9	—	84.0	80.0	481.7	530.4	—	6/7	5 6	5 9	5 9	6 3	15.5	
	Grootvlei.....	11,438,816 (5/-)	9	1931.6	2084.5	—	5	77.4	—	1006.6	1128.6	939.9	1044.1	30.7	1/8	1 0	1 1	1 2	1 3	11.9	
	Marievale.....	4,500,000 (10/-)	9	669.0	596.9	—	2	29.2	—	318.6	288.0	350.6	338.9	7.5	1/6½	11	11	10	10	8.9	
	St. Helena.....	9,625,000 (10/-)	9	495.5	197.2	—	2	4.3	—	—	—	461.6	200.9	332.5	11d.	—	—	—	—	—	
	Van Dyk.....	5,532,000 (10/-)	9	15.6	8.4	—	2	26.9	—	—	—	15.5	89.3	12.3	½d.	—	—	—	—	—	
General Mining	Ellaton.....	787,500 (5/-)	3	174.0	49.4	—	—	—	—	—	—	174.0	77.6	140.7	4/5	—	—	—	—	—	
	Stilfontein.....	13,062,920 (5/-)	9	1494.8	814.0	—	2	35.3	206.8	—	—	1701.8	849.3	1015.0	2/7	—	—	—	—	—	
	S. Roodepoort.....	1,420,662 (10/-)	3	59.3	58.5	—	2.3	—	—	28.0	29.0	33.6	34.3	6.6	6d.	9	9	9	9	8.4	
	W. Rand††.....	4,250,000 (10/-)	9	5.1	694.2	—	3	59.2	1423.4	495.2	537.0	342.0	983.6	1001.0	197.7	3/588	1 9	2 0	1 9	1 6	6.8
Anglo T'vaal	Klerksdorp.....	600,000 (5/-)	9	L 13.1	3.4	—	1.8	—	—	—	—	L15.9	3.2	34.3	—	—	—	—	—	—	
	Rand Leases.....	3,600,000 (10/-)	3	119.2	25.7	—	10.3	—	—	13.5	2.2	114.6	49.8	35.5	7½d.	4½	3	4½	1 0	5.1	
	Village M.R.....	6,068,457 (1/3)	3	32.4	36.0	—	2.5	—	—	10.5	12.5	21.9	25.7	9	1d.	1.5d.	1.5d.	1.8d.	1.8d.	9.1	
Others	N. Kleinfontein.....	1,735,000 (£1)	9	130.4	232.6	—	2	25.5	—	—	—	129.1	202.7	26.2	1/6	9	1 1½	1 4½	1 6	17.0	
	Spaarwater.....	7,974,968 (5/-)	9	—	L 28.7	—	4.4	—	—	—	—	—	L 24.3	4.0	—	—	—	—	—	—	
	Nigel Gold.....	1,439,269 (10/-)	9	15.8	L 8.7	—	5.5	—	—	—	—	15.8	L3.209	—	2½d.	—	—	—	—	—	
	W. Nigel.....	7,974 720 (2/6)	3	26.9	21.1	—	1.5	—	—	—	—	28.5	23.8	26.0	1d.	—	1½	—	—	5.2	

**Includes sundry revenue less sundry expenses ††Calculated on net profit after tax †Including uranium cap. exp. *Calculated on stopping width
 ††After Defd. shares' participation †Also Loan Capital and/or loans other than uranium †††Schedular uranium producers L indicates loss
 †Profit figures take into account £20,043 from sale of Copper/Gold concentrates †††1953 figures not comparable †Also 25,000 Defd. shares (£1) which take
 first 25 per cent of distributable profits †Production started in August †Production started Apr. 1 †Production started Sept. 1

DEVELOPMENT AND MILLING RESULTS

(Cumulative and Comparative "this" financial year to September 30, 1954 with "last.")

GROUP	COMPANY	Months since year end	DEVELOPMENT RESULTS												MILL THROUGHPUT												
			TOTAL ORE RESERVES			Payability								Tonnage				Gold Recovered						Working Profit			
			Tons (000)	Value (dwt.)	Inch dwt.	Ft. Sampled (000)		%		Av. Value (In. dwt.)		Milled (000)		Cost per Ton		Ounces (000)		Grade (dwt. per ton)		Cost per ounce		Per ton		Per oz.			
						This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last		
Gold Fields	D'ntontein	3	807	7.0	281	3.4	—	90	—	348*	—	150	—	49/11	—	49.7	—	6.6	—	150/8	—	32/9	—	99/-	—		
	Libanon	3	1,993	4.5	237	5.0	5.0	73	63	285*	295*	289	250	41/9	40/3	60.4	50.8	4.2	4.1	199/6	198/-	10/6	10/2	50/2	50/2		
	Luipaards VI.	3	2,222	4.4	181	3.4	6.6	63	61	271*	215*	329	319	41/2	38/2	65.0	59.1	4.0	3.7	208/5	205/8	8/2	7/11	41/6	42/11		
	Rietfontein C.	9	424	5.2	263	6.7	7.3	54	46	533*	366*	248	240	39/1	36/3	55.9	53.6	4.5	4.5	173/6	162/9	17/2	18/11	76/1	84/10		
	Robinson Dp.	9	1,351	4.5	233	4.8	8.5	43	48	480*	387*	890	881	47/2	45/5	187.1	170.9	4.2	3.9	224/4	233/11	5/3	2/8	24/10	13/10		
	Simmer	9	1,610	3.9	184	21.0	19.6	37	38	275*	282*	1,130	1,109	38/3	37/8	182.3	177.7	3.2	3.2	237/4	234/11	1/11	2/1	12/-	13/-		
	Sub Nigel	3	1,464	8.1	301	9.5	8.9	29	26	326*	378*	199	199	53/7	51/6	65.6	66.6	6.6	6.7	163/-	154/3	28/6	31/3	86/7	93/7		
	Venterspost	3	2,593	5.6	309	5.6	7.2	51	47	442*	379*	320	313	49/9	47/4	78.6	73.2	4.9	4.7	202/9	202/3	11/7	10/9	47/1	46/1		
	Vlakfontein	9	1,358	8.4	346	22.0	21.5	43	34	376*	349*	346	332	52/2	50/9	124.1	120.0	7.2	7.2	145/5	140/6	37/1	38/9	103/5	107/4		
	Vogels	9	3,189	5.5	233	22.6	26.9	35	45	283*	280*	922	873	42/1	42/5	233.9	220.6	5.1	5.0	166/-	167/10	21/4	20/4	84/-	80/5		
W. Drie	3	731	16.4	689	3.7	3.3	100	100	827*	878*	155	132	71/2	64/10	116.8	94.4	15.1	14.3	94/6	90/8	117/2	112/11	155/5	157/10			
Anglo American	Brakpan	9	3,548	4.7	211	32.7	33.6	26	27	600	681	993	1,032	39/6	40/5	167.4	184.7	3.4	3.6	234/5	225/10	2/5	3/11	14/7	21/8		
	Daggas	9	13,777	5.5	241	34.5	41.4	36	49	383	392	1,999	1,971	29/2	28/1	463.7	464.3	4.6	4.7	125/9	119/2	28/6	30/3	123/2	128/6		
	East Daggas	9	4,332	4.3	159	24.0	31.6	20	22	246	247	840	819	32/3	32/4	142.6	142.3	3.4	3.5	190/2	186/3	10/-	10/8	58/11	61/5		
	P. Brand b.	9	—	—	—	9.1	—	96	—	1543	—	61	—	69/8	—	27.8	—	9.1	—	152/11	—	44/1	—	96/8	—		
	P. Steyn c.	9	—	—	—	12.4	—	90	—	644	—	261	—	57/11	—	73.9	—	5.7	—	204/6	—	12/7	—	44/5	—		
	S.A. Lands	9	3,198	5.2	216	31.5	29.6	38	32	528	500	906	900	35/-	34/10	166.8	164.1	3.7	3.6	189/10	191/2	10/10	10/3	58/10	56/4		
	Springs	9	2,764	4.6	200	16.8	17.9	36	34	597	506	1,162	1,324	33/7	32/8	162.4	182.2	2.8	2.7	240/2	237/3	1/2	1/5	8/3	10/4		
	Welkom	9	1,305	5.0	246	17.6	11.8	76	61	454	362	642	562	48/5	44/4	128.6	109.5	4.0	3.9	241/9	227/7	1/6	3/11	7/8	20/2		
	W. Holdings	9	787	10.1	485	10.7	6.2	88	86	838	728	426	109	59/10	59/4	149.5	28.5	7.0	5.2	170/8	226/7	27/6	5/6	78/3	21/-		
	W. Reefs	9	4,763	4.9	233	32.7	31.3	48	50	500	432	1,040	980	37/8	35/11	204.2	220.4	3.9	4.1	191/8	175/10	11/3	14/9	57/3	71/11		
Central Mining	Blyvoor	3	6,689	12.5	579	3.2	3.2	78	92	925	603	324	306	53/11	48/8	184.7	181.2	11.4	11.8	94/7	82/3	88/5	98/4	155/1	166/-		
	City Deep	9	5,700	5.8	248	26.3	27.3	38	34	288	286	1,475	1,426	45/6	45/4	281.2	276.6	3.8	3.9	238/9	233/7	2/-	2/9	10/4	14/2		
	Consol M.R.	3	3,671	3.8	197	6.4	3.6	40	38	238	476	550	519	31/7	31/9	76.8	71.3	2.8	2.7	225/10	231/4	3/4	2/3	23/10	16/5		
	Crown Mines	9	12,208	4.9	237	29.4	32.9	57	57	317	410	2,579	2,429	35/11	36/5	407.6	386.1	3.2	3.2	227/-	229/1	3/6	3/-	22/-	18/8		
	Durban Deep	9	8,451	4.3	255	30.0	30.2	61	73	416	343	1,600	1,605	36/-	34/5	264.4	270.2	3.3	3.4	217/11	204/9	5/2	7/3	31/3	43/1		
	E. Rand Prp.	9	7,987	5.3	257	15.8	11.4	53	64	482	335	1,826	1,701	44/3	43/1	413.6	375.4	4.5	4.4	195/5	195/5	12/2	11/7	53/7	52/6		
	Harmony d.	3	—	—	—	1.0	—	84	—	556	—	40	—	65/3	—	13.0	—	6.5	—	200/8	—	16/1	—	49/4	—		
	Modder B.	9	336	3.9	202	—	—	—	—	—	—	509	489	25/3	26/-	53.2	52.2	2.1	2.1	241/6	243/1	11d.	7d.	8/10	5/8		
	Modder E.	3	2,286	3.1	137	1.0	2.4	43	37	188	180	357	356	26/5	25/6	40.7	40.1	2.3	2.3	231/6	226/1	2/2	2/7	18/8	23/3		
	New Modder	3	—	—	—	—	—	—	—	—	—	29	24	36/5	37/3	4.3	3.9	3.0	3.2	239/3	231/8	1/7	2/9	10/8	16/11		
Rose Deep	9	1,394	3.9	229	11.9	11.7	33	35	344	337	636	658	34/6	34/7	96.6	98.0	3.0	3.0	227/4	232/6	3/4	2/3	21/9	15/3			
T'v'l G.M.E.	9	225	7.9	—	2.8	6.7	39	42	257	240	220	243	57/4	50/4	48.0	48.7	4.4	4.0	262/5	251/-	8d.	1/6	3/1	7/8			
Welgedacht	3	419	2.8	108	1.0	1.4	11	37	136	121	98	102	28/8	29/1	11.6	12.7	2.4	2.5	241/1	232/8	1/-	2/1	8/7	16/7			
J.C.I.	E. Ch'p'd'Or	9	76	3.4	173	1.1	1.5	75	74	213	210	203	218	43/4	38/11	19.6	34.4	1.9	3.2	448/9	246/8	L19/3	1d.	L199/1	5d.		
	Freddies Cons.	9	—	—	—	7.7	—	75	—	325	—	708	—	59/10	—	118.3	—	3.3	—	358/5	—	L17/10	—	L106/6	—		
	Govt. G.M.A.	9	7,024	2.9	168	12.9	14.3	34	53	270	241	2,342	2,203	30/2	29/9	300.6	298.7	2.6	2.7	235/1	219/1	2/2	3/10	16/9	27/10		
Randfontein	9	3,150	3.2	166	10.8	21.1	48	46	250	269	2,585	2,753	36/6	30/2	333.7	352.0	2.6	2.6	283/1	236/1	L4/2	1/5	L32/-	10/11			
Union Corporation	East Geduld	9	11,500	5.7	291	4.4	5.0	69	47	388	264	1,228	1,222	31/7	29/7	377.6	366.9	6.1	6.0	102/9	98/6	44/11	44/9	146/1	149/1		
	Geduld Prop.	9	2,500	3.4	180	7.7	8.0	12	27	218	230	834	855	34/3	33/9	135.8	135.6	3.3	3.2	211/10	206/7	6/1	6/9	37/4	42/7		
	Grootvlei	9	16,000	4.6	218	14.7	26.5	39	43	197	213	1,622	1,663	29/3	27/8	346.0	345.4	4.3	4.3	137/1	129/10	23/10	25/1	111/8	117/7		
	Marievale	9	3,600	5.5	258	17.0	15.0	37	44	282	335	590	563	40/9	39/3	150.3	137.5	5.1	4.9	160/-	160/10	22/8	21/3	89/-	86/10		
	St. Helena	9	2,000	5.3	270	15.2	19.7	65	51	417	309	747	576	42/1	42/9	166.3	115.4	4.4	4.0	189/3	213/5	13/3	6/10	59/7	34/1		
Van Dyk	9	1,300	3.7	155	16.5	17.9	26	26	213	213	706	788	42/5	40/-	121.6	127.9	3.4	3.2	246/3	246/4	5d.	1/3	1/7	1/4			
General Mining	Ellaton	3	414	9.1	428	1.4	—	89	—	280	—	84	—	44/4	—	28.9	—	6.9	—	128/11	—	41/5	—	120/4	—		
	Stilfontein	9	2,270	7.5	270	14.5	14.2	78	80	373	362	740	569	45/4	43/3	254.9	165.1	6.9	5.8	131/8	149/1	40/5	28/7	117/3	98/7		
	S. Roopepoort	3	1,140	4.7	226	2.8	5.7	28	35	295	286	83	83	39/5	39/9	18.0	18.0	4.3	4.3	182/9	182/7	14/2	14/1	65/11	64/8		
	W. Rand††	9	7,231	3.4	170	19.0	—	53	—	284	—	2,038	—	32/4	—	266.4	—	2.6	—	247/2	—	1d.	—	5d.	—		
Anglo T'vaal	Klerksdorp	9	187	2.5	123	3.3	2.9	35	38	188	169	100	95	32/9	32/5	12.2	12.7	2.4	2.7	269/8	241/10	L2/7	9d.	L21/6	5/4		
	Rand Leases	3	4,971	4.2	178	10.0	7.6	42	46	251	267	554	485	37/7	41/1	93.3	82.7	3.4	3.4	223/1	241/-	4/4	1/1	25/7	6/3		
	Village M.R.	3	—	—	—	—	—	—	—	—	—	105	102	30/11	31/5	15.6	15.9	3.0	3.1	207/6	202/6	6/2	7/1	41/5	45/5		
Others	N.kleinfontein	9	2,945	3.2	152	19.5	21.7	34	42	186	210	969	963	28/4	27/2	120.5	124.4	2.5	2.6	227/7	210/5	2/8	4/10	21/8	37/5		
	Sparwater	9	150	6.2	230	8.0	10.6	44	44	365	346	96	95														

of ore exposed is very good indeed, it is slender evidence on which to base the future of the mine. Confidence in this mine is strong as the market price shows so that some startling news could easily come from this direction in the near future. Welkom, in the same locality could also announce some interesting figures as the company is driving towards the Western Holdings boundary and there are those who believe that the rich reef running through the boundary area of F.S. Geduld and Western Holdings will extend into Welkom.

PRESIDENT BRAND LOOKS CHEAP

President Brand is an interesting proposition no matter how viewed. Up to the end of June this company had sampled over 10,500 ft. of the 59,500 ft. driven with a 96 per cent payability giving average values of 1,611 in. dwt. The September quarterly results added another 17,700 ft. to the total advance of which 2,755 ft. were sampled with 98 per cent payability yielding values averaging 1,158 in. dwt. What appears incredible about this company is that it is having an extremely difficult time breaking through a price level of £4 per share. On all available evidence, and taking the share prices of Western Holdings and F.S. Geduld as guides, Brand should stand much higher. Presumably, before acting, the market is now awaiting this company's returns for the next month or two to see if the high grade ore exposed is finding its way through the mill and at what recovery grade. In connection with the monthly returns, the announcement in the September quarterly reports of President Steyn and Welkom that their respective plant capacity has now been extended to handle 125,000 tons per month may well mean a sharp improvement in the profits of both companies, particularly Welkom whose monthly returns have disappointed.

St. Helena has acquired something of a reputation since it came into production for the steady improvement it has shown each month. Development results have ranged from fair to good, and although this suggests a certain amount of reef erosion or faulting these conditions are not uncommon in the O.F.S. "Saints" have one of the biggest lease areas of any South African gold mine and it will be a long time before underground development has penetrated to the point where the full picture of the underground reef formations is known. Particular interest, in the near term, centres around the results, which it is hoped will soon be announced, of the boreholes put down by this company over the past year or so on the Brand boundary line. These could be extraordinarily good and, if so, it is thought that the company will sink a deep shaft in this area to tap the reef.

The foregoing potential sources of glad tidings, if forthcoming over the next few months, could well lift the Kaffir market into a new phase. Nevertheless, without any unusually exciting news from particular areas or companies the present price levels over the whole market should be better for the reasons stated earlier. In any event, a livelier time appears to lie ahead for most of the gold/uranium producers as their profit positions go from strength to strength.

OUTLOOK FOR GOLD-URANIUM SHARES

West Rand Consolidated in September 1952 became the first South African mine to produce uranium. Since that historic occasion doubts have been expressed from time to time as to whether uranium production should be considered as a factor to be reckoned with after the initial 10-year period during which time A.E.C. shoulders the capital risk and the mine's output of uranium concentrates are negotiated on the basis of production costs, including amortization, plus a reasonable profit. These doubts about the continued demand for uranium metal have now been largely dispelled and it is worth bearing in mind that if the 10-year contracts are extended, available profits should improve as their absorption to redeem the loans made by the A.E.C. will have been completed. This is looking too far ahead to be of much moment now but it is instructive to note that Mr. Jesse C. Johnson, Director of the Division of Raw Materials, U.S.A. Atomic Energy Commission, speaking before the American Mining Congress at its recent meeting in San Francisco, said that a production rate of 17,000 tons of uranium oxide, which was roughly equivalent to 14,000 tons of uranium metal, would be the extent of the industrial market by 1975 or 1980 and that the present defence programme might support a production rate of 17,000 tons or even more for many years.

In the Far East Rand, Daggafontein is working the Kimberley

and Main reef for uranium and Vogelstruisbult is expected to come into production before the end of this year. Both these mines work an above average gold grade and thus profits from uranium are not of crucial importance. In fact, there are distinct possibilities in both cases that the exploitation of uranium will lead to a lowering of the gold grade. But over the last three quarters, gold profits have moved up from £909,000 in the March quarter to £980,000 in the September quarter, while uranium profits, after redemption, have advanced from £185,000 to £239,000 during the same period so that uranium profits represent about 19.6 per cent of the total profits earned in the September quarter.

RANDFONTEIN MAY BE INVOLVED

In the West Rand there are four scheduled producers; West Rand Consolidated, Randfontein, East Champ d'Or and Luipaardsvlei. All four mines will work the extensive Bird Reefs in the area. West Rand Consolidated depends almost entirely on its uranium profits which have shown a satisfactory increase in each of the last three quarters. The September three months' uranium profits, after deducting quarterly instalments of some £54,000, totalled £520,000 which represents about 94 per cent of the total revenue from uranium and gold amounting to £555,000. The largest plant in this area is Randfontein which is also treating the slimes from the adjoining East Champ d'Or property. Randfontein is one of the mines which stands to benefit enormously from uranium production and recent estimates of its potential earning power, after providing for all charges including tax, interest and capital repayments, varies from 9s. per share to 12s. per share which, if realized, would make the current quotation cheap indeed. The company announced in the September quarterly that its plant is operating at virtually full capacity but this does not, in all likelihood, mean at maximum efficiency. Thus there appears to be a considerable scope for profit earnings to expand further.

Three mines on the Far West Rand, West Driefontein, Doornfontein and Blyvooruitzicht, will be uranium producers. Currently, only Blyvoors is treating uranium and as this company is one of the high grade gold producers, uranium profits, relatively speaking, are not of any great consequence. In the September quarter, profits from uranium constituted a shade over 10 per cent of the total profits earned from gold and uranium. Uranium-bearing slimes from Doornfontein will be treated eventually at West Driefontein.

Western Reefs and Stilfontein are the two current uranium producers in the Klerksdorp district and Stilfontein will treat the slimes from Ellaton, New Klerksdorp, Afrikander Lease, and Babroscro. At Western Reefs uranium profits have shown consistent improvement and with respect to the September quarter, uranium earnings of approximately £245,000 contrasted with gold profits of £195,000 and therefore represented over 55 per cent of the quarter's total earnings. Uranium profits of Stilfontein during the September quarter were disappointing, the £63,000 earned from this source stands without deducting amortization allowance and compares with earnings of £603,000 from gold mining. Vaal Reefs has made application to be a uranium producer and it is believed that both Buffelsfontein and Hartebeestfontein will be admitted as scheduled producers in due course. Although seven mines in the O.F.S. are listed as scheduled producers none of these mines are producing as yet, but Harmony has announced that profits from this source, after loan redemption and interest, were estimated at about one-third of the working profits from gold mining. If Harmony turns out to be a 10 dwt. proposition then uranium profits should be a useful additional source of revenue.

Virginia, which is adjacent to Harmony, is a listed producer and its plant is well advanced. Elsewhere, the two uranium plants at Welkom and at President Steyn, which will treat the residual slimes of any or all five of the Anglo American Corporation mines in the vicinity, and should be ready before very long. However, the uranium content in development at Welkom and Western Holdings does not at present justify their residual slimes being leached and F.S. Geduld has not accomplished sufficient development footage to be able to assess its position in the present arrangements. Thus only the two Presidents will, at the outset, take advantage of treating both gold and uranium. Freddie Consolidated has made application to become an uranium producer and its slimes will be treated at the Welkom plant and it is thought that should Loraine become a producer its slimes will also be treated at Welkom.

ANGLO-TRANVAAL CONSOLIDATED INVESTMENT CO. LIMITED

Mining Companies' Directors' Reports for Quarter Ended 30th September, 1954

Following are the reports on work done during the quarter ended September 30, 1954

ANGLO-TRANVAAL COLLIERIES, LIMITED

The Sales Output of the Subsidiary Collieries controlled by this Company for the quarter ended September 30, 1954, totalled 260,079 tons.

CONSOLIDATED MURCHISON (TRANVAAL) GOLDFIELDS & DEVELOPMENT COMPANY, LIMITED

The following is the report on the work done during the quarter ended September 30, 1954.

Tons crushed	24,236
Estimated Profit from Antimony and Gold	£260,447

Sales of Antimony were effected during the quarter.

Taxation for the nine months ended September 30, 1954, in respect of total profits for this period amounting to £508,990, is estimated at £150,000.

The Capital Expenditure during the period amounted to £3,308.

During the quarter the development footage accomplished amounted to 2,013 ft. In connection with antimony/gold ore bodies, 1,479 ft. were developed in haulages and cross-cuts and 340 ft. in ore bodies beyond the previously established payable limits. 270 ft. were sampled, of which 30 ft. were found to be payable; the remaining 240 ft. were unpayable on account of the combined gold and antimony content.

No development was carried out on reef in the main ore bodies known to carry payable values.

A further 194 ft. were accomplished in connection with lenses known to carry gold only, of which 20 ft. were on reef. 10 ft. were sampled and proved to be unpayable, giving an average value of 3.5 dwt. per ton over a width of 64 in.

EASTERN TRANVAAL CONSOLIDATED MINES, LIMITED

PRODUCTION.—The total tonnage treated by the four gold mines operated by this Company amounted to 55,940 tons, resulting in a working profit (including sundry revenue) of £44,802 for the quarter.

The drop in working profits for the quarter was attributable to an increase in working costs mainly caused by the inadequate supply of coal for operating the New Consort Power Station, particularly during September, 1954, when working costs were increased by an amount estimated at £4,000. Since the close of the quarter an improvement has been effected in the delivery of coal supplies, but it is estimated that, until adequate supplies of coal are made available, costs will be adversely affected by approximately £2,000 per month.

TAXATION.—Taxation for the quarter ended September 30, 1954, in respect of mining profits for this period amounting to £44,802, is estimated at £5,000.

CAPITAL EXPENDITURE.—Capital Expenditure during the quarter amounted to £24,305.

DEVELOPMENT.—The total development footage amounted to 11,471 ft.

SHAFT SINKING AND EQUIPMENT.—**Sheba Gold Mine.**—The Soper Shaft is being re-opened and equipped to expedite the prospecting of the lower levels of the Edwin Bray and Margaret Sections. **Agnes Gold Mine.**—Preparations were commenced for the sinking, from the 17th level, of a sub-vertical shaft to facilitate exploration of the Ivy Main Shoot at depth.

REDUCTION PLANT.—**New Consort Gold Mine.**—The erection of the new crushing and flotation plants for treating New Consort ore, only, is nearing completion. **Sheba Gold Mine.**—The new crushing and flotation plants, which were brought into commission at the end of June, 1954, are operating satisfactorily. **Agnes Gold Mine.**—Good progress was made on foundations for the new reduction plant. This has been sited at the entrance to the Ben Lomond Tunnel in order to effect economies in the delivery of ore.

HARTEBEESTFONTEIN GOLD MINING COMPANY, LIMITED

SHAFT SINKING.—**No. 1 Shaft** was sunk 110 ft. in Upper Witwatersrand Quartzites to its final depth of 3,041 ft. In addition, 55,560 cu. ft. were excavated in the cutting of stations at the 6th level and at the Transfer level, at depths of 2,950 ft. and 3,000 ft., respectively. The shaft was concrete lined to a depth of 3,033 ft., of which 125 ft. were accomplished during the quarter. The equipping of the shaft was completed to a depth of 3,030 ft., of which 230 ft. were accomplished during the quarter. **No. 2 Shaft** was sunk 228 ft. in Ventersdorp Lava to a depth of 3,297 ft., at which the shaft has been stopped, this depth attained being sufficient for present requirements. In addition, 63,018 cu. ft. were excavated in the cutting of stations at the Transfer level, the main pumping level and the belt level, at depths of 3,096 ft., 3,140 ft. and 3,170 ft., respectively. The shaft was concrete lined to a depth of 3,290 ft., of which 265 ft. were accomplished during the quarter. The equipping of the shaft was completed to a depth of 3,290 ft., of which 370 ft. were accomplished during the quarter.

DEVELOPMENT.—Development was commenced at No. 1 Shaft during August, 1954, on the 5th, 6th and Transfer levels and at No. 2 Shaft during September, 1954, on the Transfer level, the main pumping level and on the belt level. A total of 2,531 ft. of development, all in country rock, was accomplished in connection with station layouts, ore passes and in crosscutting at No. 1 Shaft to the Vaal Reef horizon on the 5th and 6th levels. In addition, 30,881 cu. ft. were excavated in sumps, pump chambers and in service bays.

Of the footage advanced, 1,971 ft. were at No. 1 Shaft and 560 ft. were at No. 2 Shaft.

REDUCTION PLANT.—Work was commenced during August, 1954, on excavations and foundations for the reduction plant, which will have an initial capacity of 50,000 tons per month.

EUROPEAN HOUSING.—Work was continued on the permanent housing programme. During the quarter 94 houses were completed, bringing the total to 203 houses completed in extension of the Stilfontein Township and work is proceeding on a further 39 houses.

NATIVE ACCOMMODATION.—Nineteen additional rooms in the Compound were completed and work is in progress on a further 39 rooms. An open-air theatre in the Compound, for cinema and dancing performances, has been completed. The permanent kitchen was commenced.

MINE BUILDINGS AND PLANT.—**No. 1 Shaft Area.**—Additional shaft offices and change-houses were completed. The sinking hoist was dismantled and the building which housed this hoist is being converted into a rock-drill fitting shop and a drill sharpening shop. **No. 2 Shaft Area.**—The Electricity Supply Commission sub-station building was completed.

LABOUR.—The labour strength at the end of the quarter was: Europeans, 300; Natives, 1,309.

CAPITAL EXPENDITURE.—Capital Expenditure amounting to £695,790 was incurred during the quarter. The total Capital Expenditure, including preliminary expenses, incurred to September 30, 1954, amounted to £4,008,491.

(continued overleaf)

MERRIESPRUIT (ORANGE FREE STATE) GOLD MINING COMPANY, LIMITED

SHAFT SINKING.—No. 2 Shaft was sunk 662 ft. to a total depth of 1,657 ft. In addition, 7,776 cu. ft. were excavated in the cutting of a pump station at a depth of 974 ft. The formations traversed were Karroo Shales to a depth of 1,120 ft., followed by 492 ft. of Ventersdorp Lava to a depth of 1,612 ft., at which depth quartzites of the Upper Witwatersrand System were entered. The intersection in pilot holes of water-bearing fissures, requiring cementation, delayed sinking operations. The shaft was concrete lined to a depth of 1,602 ft., of which 665 ft. were accomplished during the quarter.

DEVELOPMENT.—Development is proceeding from No. 1 Shaft on the 26th, 31st, 33rd, 34th and 35th levels. A total of 5,846 ft. of development was accomplished and, in addition, 106,505 ft. were excavated in sumps, pump chambers and in service bays. Progress was retarded due to the intersection in pilot holes of water-bearing fissures, requiring cementation.

The following are the sampling results of the quarter's development :—

	No. 1 Shaft and Total
Footage advanced	5,846
Footage on reef	2,053
Footage sampled	2,110
Payable Footage Sampled :—	
Payable footage	1,340
Percentage payable	63.5
Channel width—in.	26.0
Channel value—dwt.	13.35
In.-dwt.	347

(The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding Ore Reserve.)

SHAFT EQUIPMENT.—No. 1 Shaft.—Preparations were completed for the deepening of this shaft and sinking operations will be commenced during the quarter ending December 31, 1954. No. 2 Shaft.—The 750 H.P. electric motor for the sinking hoist was replaced by a 1,150 H.P. electric motor.

REDUCTION PLANT.—Work is proceeding on the erection of the reduction plant.

MINE BUILDINGS AND PLANT.—No. 1 Shaft Area.—The erection of the permanent workshops is nearing completion. Work is in progress on the permanent change house and on the erection of steelwork and on the brick panels of the permanent compressor house.

EUROPEAN HOUSING.—Work was continued on the permanent housing programme in the Virginia Township. During the quarter, 75 houses and a block of rooms in the single quarters, together with the Mess were completed. Work is proceeding on a further 41 houses.

NATIVE ACCOMMODATION.—At the end of the quarter 2,084 Natives, including Contractors' Natives, were housed in the permanent compounds. The building of additional rooms at No. 1 compound is proceeding.

LABOUR.—The labour strength at the end of the quarter was : Europeans, 260 ; Natives, 2,058.

CAPITAL EXPENDITURE.—Capital Expenditure amounting to £776,002 was incurred during the quarter. The total Capital Expenditure, including preliminary expenses, incurred to September 30, 1954, amounted to £5,101,608.

MIDDLE WITWATERSRAND (WESTERN AREAS) LIMITED

This Company retains its interests in Mineral Rights in the Virginia and Odendaalsrus Districts of the Orange Free State and in the Klerksdorp District of the Transvaal.

No drilling operations were carried out during the quarter.

NEW KLERKSDORP GOLD ESTATES, LIMITED**PRODUCTION**

Tons milled : 33,500, yielding 4,095 ounces of fine gold.

		Per Ton Milled
Revenue from Gold	£50,930	30s. 5d.
Working Costs	£55,392	33s. 1d. (270s. 7d. per oz. fine)
Deficit	£4,462	2s. 8d.
Sundry Revenue	£745	5d.
Working Loss for Quarter	£3,717	2s. 3d.

The working loss for the quarter, as shown above, does not take into consideration interest on loans amounting to £1,511 for the quarter. No liability was incurred for the quarter in respect of mining taxation payable to the Government.

DEVELOPMENT.—The total footage advanced during the quarter amounted to 2,079 ft. Of 1,320 ft. sampled, 510 ft., equal to 39 per cent, were payable, having an average value of 4.60 dwt. over a channel width of 42.0 in., equivalent to 193 in.-dwt. (The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding Ore Reserve.)

The influx of water, which retarded development on the 6th and 9th levels during the previous quarter, was brought under control during August, 1954.

URANIUM PRODUCTION.—During the quarter, the pipe lines and pumping stations required to convey the Uranium-bearing slimes from New Klerksdorp Gold Estates, Limited, and the three other contributing mines, to the extended treatment plant at Stilfontein Gold Mining Company Limited, were completed and tested.

CAPITAL EXPENDITURE.—Capital Expenditure amounting to £10,908 was incurred during the quarter on plant for Uranium production.

RAND LEASES (VOGELSTRUISFONTEIN) GOLD MINING COMPANY, LIMITED**PRODUCTION**

Tons crushed : 554,000 yielding 93,274 oz. fine of gold.

		Per Ton Crushed
Revenue from Gold	£1,159,838	41s. 11d.
Working Costs	£1,040,582	37s. 7d. (223s. 1d. per oz. fine)
Sundry Revenue	£119,256	4s. 4d.
Working Profit for Quarter	£128,156	4s. 8d.

Working costs per ton, 37s. 7d., include 5s. 2d in respect of development expenditure.

TAXATION AND GOVERNMENT'S SHARE OF PROFITS.—Taxation and Government's share of profits in terms of the Mining Lease for the quarter ended September 30, 1954, in respect of total profits for this period amounting to £128,156, are estimated at £13,500.

CAPITAL EXPENDITURE.—The net expenditure on Capital Account during the quarter amounted to £35,462, of which £27,129 was incurred on the sinking of No. 1 Tertiary Shaft.

SHAFT SINKING.—No. 1 Tertiary Shaft was sunk 63 ft. to a depth of 100 ft. below the 36th level. At the end of the quarter, the total shaft length accomplished was 207 ft., of which 19 ft. above the 36th level remain to be slipped to full dimensions. 121 ft. were concrete lined during the quarter. In addition, 78 ft. and 20,304 cu. ft. were excavated in the cutting of pump chambers on the 36th level and in the conveyor cross-raise to the shaft. **Kimberley Reef No. 2 Incline Shaft.**—The deepening of this shaft was commenced during the quarter and 87 ft. were sunk to a total length of 1,488 ft.

DEVELOPMENT.—A total of 20,389 ft. of shaft sinking and development was accomplished during the quarter, of which 10,045 ft. were sampled, showing 4,170 ft., equal to 42 per cent, was payable. Payable reef disclosures were distributed as follows:—

Reef	Footage Sampled	Payable				
		Footage	Percentage	Channel width (in.)	Channel value (dwt.)	In.-dwt.
Main Reef	2,870	1,065	37	28.6	8.48	242
Main Reef Leader	4,810	2,490	52	16.7	15.34	256
South Reef	625	295	47	9.2	24.33	224
Total Main Reef Series	8,305	3,850	46	19.4	12.87	250
Bird Reef	50	—	—	—	—	—
Kimberley Reef	1,690	320	19	63.6	4.20	267
Totals and Averages	10,045	4,170	42	22.8	11.01	251

(The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding Ore Reserve.)

VILLAGE MAIN REEF GOLD MINING COMPANY (1934) LIMITED PRODUCTION

Tons crushed: 104,700, yielding 15,585 oz. fine of gold.

		Per Ton Crushed
Revenue from Gold	£194,122	37s. 1d.
Working Costs	£161,690	30s. 11d. (207s. 6d. per oz. fine)
Working Profit for Quarter	£32,432	6s. 2d.

Working costs per ton, 30s. 11d., include 6s. 1d. in respect of development expenditure.

TAXATION.—Taxation for the quarter ended September 30, 1954, in respect of total profits for this period amounting to £32,432, is estimated at £10,500.

DEVELOPMENT.—9,215 ft. of development were advanced during the quarter and 5,973 ft. of old drives and crosscuts were re-conditioned. In addition, 1,902 ft. of underground diamond drilling were done as an aid to development and in exploratory work.

CAPITAL EXPENDITURE.—The expenditure on Capital Account during the quarter amounted to £882.

VIRGINIA ORANGE FREE STATE GOLD MINING COMPANY, LIMITED

DEVELOPMENT.—A total of 9,988 ft. of development was accomplished and, in addition, 122,218 cu. ft. were excavated in sumps, pump chambers and in service bays. The whole of this work was at No. 1 Shaft. Progress was retarded due to the intersection in pilot holes of water-bearing fissures, requiring cementation. The following are the sampling results of the quarter's development:—

	No. 1 Shaft and Total
Footage advanced	9,988
Footage on reef	6,885
Footage sampled	6,775
Payable Footage Sampled:—	
Payable Footage	4,325
Percentage payable	63.8
Channel width—in.	26.9
Channel value—dwt.	10.71
In.-dwt.	288

(The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding Ore Reserve.)

SHAFT EQUIPMENT.—At No. 1 Shaft, equipment is being installed at the main pumping stations on the 16th and 28th levels.

REDUCTION PLANT.—Trial milling operations were continued during the quarter and production of gold commenced officially on September 22. Regular monthly declarations will commence with the month of October, 1954. An amount of approximately £337,000 accrued towards the end of the quarter from the sale of 27,054 f.oz. of gold recovered during the trial milling period. Work on extensions to the reduction plant to provide a milling capacity of 75,000 tons per month is proceeding satisfactorily.

URANIUM AND ACID PLANTS.—Construction work on the sulphuric acid plant is nearing completion. Construction work on the uranium plant is proceeding satisfactorily.

MINE BUILDINGS AND PLANT.—No. 1 Shaft Area.—The permanent mine general offices and the extensions to the workshops were completed. Further extensions were made to the Electricity Supply Commission sub-station and two 2,500 K.V.A. transformers were installed.

EUROPEAN HOUSING.—Work was continued on the extension to the permanent housing programme. During the quarter 7 houses were completed, bringing the total to 385 houses completed in the permanent quarters in the Virginia Township. Work is proceeding on a further 34 houses, 32 flats and on the extension to the Mess.

LABOUR.—The labour strength at the end of the quarter was: Europeans, 486; Natives, 3,393.

CAPITAL EXPENDITURE.—Capital Expenditure amounting to £1,510,188 was incurred during the quarter. The total Capital Expenditure, including preliminary expenses, incurred to September 30, 1954, amounted to £13,058,904. Included in this amount is a total of £2,598,917 expended on uranium and acid production.

JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY, LIMITED

(Incorporated in the Union of South Africa)

MINING COMPANIES' REPORTS FOR QUARTER ENDED 30th SEPTEMBER, 1954

GENERAL REMARKS—The revenue from gold has been calculated on the basis of gold at 248s. 2d. per ounce fine for July, 248s. 4d. for August, and 249s. 7d. for September, 1954.

In determining the payable development footage, gold has been taken at 248s. 3d. per ounce fine.

The development figures are the actual results of the sampling of development work on reef; no allowance has been made for modifications which may be necessary when computing the ore reserves.

10 and 11 Austin Friars, London, E.C.2. October 15, 1954.

THE EAST CHAMP D'OR GOLD MINING COMPANY, LIMITED

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£259,875

Crushed 62,000 tons; yielding 5,738 ounces fine gold

Revenue from Gold and Sundry Revenue	£72,009
Working Costs	154,918
Loss on Gold	£82,909
Estimated Net Revenue from Uranium (see note below)....	98,000
Profit for Quarter	£15,091

Working Costs: per ton crushed 50s.

The estimated revenue from the production of Uranium is subject to future adjustments and represents the estimated value of the output less plant operating costs and provision for interest on and repayment of the loans raised for the project.

(Note: As expenditure incurred in connection with the Uranium Project ranked as an allowance for normal tax purposes, the Company was relieved from liability for normal tax for the quarter.)

URANIUM PROJECT.—Expenditure during the quarter in connection with the Uranium Project amounted to £4,663, making a total to date of £220,673; the Uranium Loan, together with accrued interest, totalled £217,212 at September 30, 1954.

DEVELOPMENT.—The total footage developed for the quarter, including 5,299 feet on the Bird Reef Horizon, amounted to 5,519 feet. The footage sampled for gold totalled 160 feet, all of which was payable, and which had an average value of 205.0 dwt. over 1 in.

GOVERNMENT GOLD MINING AREAS (Modderfontein) CONSOLIDATED, LIMITED

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£1,400,000

Crushed 797,000 tons; yielding 102,207 ounces fine gold.

Revenue from Gold and Sundry Revenue	£1,302,203
Working Costs	1,214,181
Profit on Gold	88,022
Estimated Net Revenue from Pyrite (see note below)....	11,371
Profit for Quarter	£99,393

Working Costs:

per ton crushed 30s. 6d.

per fine ounce produced 237s. 7d.

The estimated revenue from the production of Pyrite is subject to future adjustments and represents the estimated value of the output less plant operating costs and provision for interest on and repayment of the loans raised for the project.

The Government's share of profits for the quarter is estimated at £7,893.

The expenditure on Capital Account (other than on the Pyrite Recovery Plant) amounted to £7,427.

PYRITE RECOVERY PLANT.—Metallurgical and mechanical difficulties, which are now being overcome, were encountered in the operation of the pyrite plant during the quarter. Output was, therefore, well below the designed capacity of the plant.

Expenditure during the quarter amounted to £38,906, making a total to date of £527,162.

The amounts advanced to the Company, together with accrued interest, totalled £340,754 at September 30, 1954.

DEVELOPMENT.—The total DEVELOPMENT FOOTAGE for the quarter amounted to 5,488 ft. The footage sampled totalled 4,455 ft. and gave the following results: PAYABLE, 1,220 ft., having an average value of 4.8 dwt. over 62 in. UNPAYABLE, 3,235 ft., having an average value of 1.9 dwt. over 52 in.

THE RANDFONTEIN ESTATES GOLD MINING COMPANY, WITWATERSRAND, LIMITED

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£4,063,553

Crushed 867,000 tons; yielding 106,227 ounces fine gold.

Revenue from Gold and Sundry Revenue	£1,341,365
Working Costs	1,640,894
Loss on Gold	£299,589
Estimated Net Revenue from Uranium and Acid (see note below)	465,000
Profit for Quarter	£165,471

Working Costs: per ton crushed, 37s. 10d.

The estimated revenue from the production of Uranium and Acid is subject to future adjustments and represents the estimated value of the output less plant operating costs and provision for interest on and repayment of the loans raised for the project.

(Note: As expenditure incurred in connection with the Uranium Project ranked as an allowance for normal tax purposes, the Company was relieved from liability for normal tax for the quarter.)

The expenditure on Capital Account (other than on the Uranium Project) amounted to £105.

URANIUM PROJECT.—Expenditure during the quarter in connection with the Uranium Project amounted to £589,256, making a total to date of £6,210,533; the Uranium Loan, together with accrued interest, totalled £6,169,583 at September 30, 1954.

The uranium treatment plant is now operating virtually at full capacity. Mining operations on the uranium bearing Bird Reefs are being extended in order to prepare the mine to supply the additional ore required for the extension to the uranium plant, which it is expected will be completed by the end of the year.

DEVELOPMENT.—The total footage developed for the quarter, including 19,420 ft. on the Bird Reef Horizon, amounted to 24,455 ft. The footage sampled for gold totalled 2,200 ft. and gave the following results: PAYABLE, 1,010 ft., having an average value of 5.8 dwt. over 38 in. UNPAYABLE, 1,190 ft., having an average value of 3.5 dwt. over 24 in.

FREDDIES CONSOLIDATED MINES, LIMITED

(Incorporated in the Union of South Africa)

SHARE CAPITAL

Authorized	£17,500,000
Issued	£16,359,913
In Reserve	£1,140,087
Crushed 272,000 tons; yielding 44,735 ounces fine gold.	
Revenue from Gold and Sundry Revenue	£563,820
Working Costs	620,141
Loss for Quarter	£56,321

The expenditure on Capital Account during the quarter amounted to £483,533 which sum includes an amount of £222,000 expended on additional development.

DEVELOPMENT.—The development footage for the quarter totalled 23,525 ft., made up as follows:—

Shaft	Haulages	Drives	Winzes and Raises	Crosscuts, etc.	Total
	Ft.	Ft.	Ft.	Ft.	Ft.
N 1 ..	2,826	264	507	1,564	5,161
N 2 ..	3,135	66	753	2,577	6,531
S. 1 ..	3,730	144	683	1,522	6,079
S. 2 ..	2,313	—	699	2,742	5,754
Totals ..	12,004	474	2,642	8,405	23,525

The DEVELOPMENT FOOTAGE sampled totalled 3,100 ft. and gave the following results: PAYABLE, 2,290 ft., having an average value of 55.7 dwt. over 6 in., equal to 334 in.-dwt., showing a percentage payability of 73.87 per cent. UNPAYABLE, 810 ft., having an average value of 17.3 dwt. over 7 in., equal to 121 in.-dwt.

MACHINERY AND PLANT.—Work on the installation of the permanent fan at No. 1 South Shaft is in progress.

BUILDINGS AND GENERAL.—Work on the erection of fifteen European dwelling houses is continuing.

Work on the erection of additional rooms at No. 2 South Compound and No. 2 North Compound has started.

OFFER OF NEW SHARES.—Of the 2,377,081 new shares of £1 each, offered at par to shareholders registered on July 23, 1954, 2,280,138 shares (equal to 96 per cent) were applied for, and the remaining 96,943 shares were taken up by the underwriters.

By Order of the Board, JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY, LIMITED.
London Secretaries, D. L. REYNOLDS, Secretary.

10 and 11 Austin Friars, London, E.C.2.
October 15, 1954.

UNION CORPORATION, LIMITED.

(Incorporated in the Union of South Africa)

Directors' Reports of Gold Mining Companies Incorporated in the Union of South Africa, for Quarter ended 30th September, 1954.

London Office: Princes House, 95, Gresham Street, London, E.C.2.

EAST GEDULD MINES, LTD.

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£1,800,000 STOCK IN UNITS OF 4s. EACH

Tons Milled.....	432,000			
Gold Produced (in oz. fine)....	132,854			
Yield per Ton Milled (dwt.) ...	6.15			
		Per Ton		
		Milled		
		s. d.		
Working Revenue.....	£1,657,676	..	76	9
Working Costs	679,453	..	31	5
WORKING PROFIT	978,223	..	45	4
Sundry Revenue less Sundry Expenditure....	2,040			
TOTAL PROFIT (subject to taxation and Government's share)	£980,263			
Estimated Taxation and Government's share of profit	£537,800			
Capital Expenditure	£4,033			

PAYABLE DEVELOPMENT

DEVELOPMENT :	Footage driven	Footage sampled	Footage payable	%	Average value dwt.	Width in.	In./dwt.
Main Reef	2,498	1,845	1,410	76	19.0	25	476

GEDULD PROPRIETARY MINES, LTD.

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£1,460,857 IN SHARES OF £1 EACH

Tons Milled.....	291,000			
Gold Produced (in oz. fine)....	47,334			
Yield per Ton Milled (dwt.) ...	3.25			
		Per Ton		
		Milled		
		s. d.		
Working Revenue.....	£591,101	..	40	8
Working Costs	489,120	..	33	8
WORKING PROFIT	101,981	..	7	0
Sundry Revenue less Sundry Expenditure....	4,690			
TOTAL PROFIT (subject to taxation).....	£106,671			
Estimated Taxation	£37,700			
Capital Expenditure	Nil			

PAYABLE DEVELOPMENT

DEVELOPMENT :	Footage driven	Footage sampled	Footage payable	%	Average value dwt.	Width in.	In./dwt.
Black Reef	3,331	2,310	530	23	2.9	68	200
Kimberley Reef ..	428	340	50	15	7.2	18	129

THE GROOTVLEI PROPRIETARY MINES, LTD.

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£2,859,704 STOCK IN UNITS OF 5s. EACH

Tons Milled.....	555,000			
Gold Produced (in oz. fine)....	118,838			
Yield per Ton Milled (dwt.) ...	4.28			
		Per Ton		
		Milled		
		s. d.		
Working Revenue.....	£1,481,276	..	53	5
Working Costs	818,719	..	29	6
WORKING PROFIT	662,557	..	23	11
Sundry Revenue less Sundry Expenditure....	4,265			
TOTAL PROFIT (subject to taxation and Government's share)	£666,822			
Estimated Taxation and Government's share of profit	£345,800			
Capital Expenditure	£13,887			

PAYABLE DEVELOPMENT

DEVELOPMENT :	Footage driven	Footage sampled	Footage payable	%	Average value dwt.	Width in.	In./dwt.
Main Reef	7,180	5,810	2,445	42	15.5	11	171

MARIEVALE CONSOLIDATED MINES, LTD.

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£2,250,000 IN SHARES OF 10s. EACH

Tons Milled.....	207,000			
Gold Produced (in oz. fine)....	52,897			
Yield per Ton Milled (dwt.) ...	5.11			
		Per Ton		
		Milled		
		s. d.		
Working Revenue.....	£659,962	..	63	9
Working Costs	412,997	..	39	11
WORKING PROFIT	246,965	..	23	10
Sundry Revenue less Sundry Expenditure....	1,622			
TOTAL PROFIT (subject to taxation and Government's share)	£248,587			
Estimated Taxation and Government's share of profit	£120,100			
Capital Expenditure	Nil			

PAYABLE DEVELOPMENT

DEVELOPMENT :	Footage driven	Footage sampled	Footage payable	%	Average value dwt.	Width in.	In./dwt.
Main Reef	4,655	3,130	1,695	54	21.6	13	281
Kimberley Reef ..	5,816	3,800	865	23	10.5	20	209

ST. HELENA GOLD MINES, LTD.

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£4,812,500 IN SHARES OF 10s. EACH

Tons Milled.....	276,000			
Gold Produced (in oz. fine)....	62,333			
Yield per Ton Milled (dwt.) ...	4.52			
		Per Ton		
		Milled		
		s. d.		
Working Revenue.....	£776,975	..	56	4
Working Costs	578,286	..	41	11
WORKING PROFIT	198,689	..	14	5
Sundry Expenditure less Sundry Revenue....	7,949			
TOTAL PROFIT (subject to taxation and Government's share)	£190,740			
Estimated Taxation and Government's share of profit	Nil			
Capital Expenditure	£158,148 including £10,542 spent on excess development footage.			

PAYABLE DEVELOPMENT

DEVELOPMENT :	Footage driven	Footage sampled	Footage payable	%	Average value dwt.	Width in.	In./dwt.
Basal Reef	12,322	5,695	3,795	67	12.0	31	371

VAN DYK CONSOLIDATED MINES, LTD.

(Incorporated in the Union of South Africa)

ISSUED CAPITAL.....£2,766,000 IN SHARES OF 10s. EACH

Tons Milled.....	237,000			
Gold Produced (in oz. fine)....	40,285			
Yield per Ton Milled (dwt.) ...	3.40			
		Per Ton		
		Milled		
		s. d.		
Working Revenue.....	£502,400	..	42	5
Working Costs	498,382	..	42	1
WORKING PROFIT	4,018	..	4	
Sundry Revenue less Sundry Expenditure....	870			
TOTAL PROFIT (subject to taxation and Government's share)	£4,888			
Estimated Taxation and Government's share of profit	Nil			
Capital Expenditure	£1,555			

PAYABLE DEVELOPMENT

DEVELOPMENT :	Footage driven	Footage sampled	Footage payable	%	Average value dwt.	Width in.	In./dwt.
Main Reef—All shafts	8,085	5,580	1,605	29	7.1	29	207
No. 5 Shaft area included above.	3,263	2,025	810	40	6.5	26	168

ANGLO AMERICAN CORPORATION OF SOUTH AFRICA, LIMITED

(Incorporated in the Union of South Africa)

GOLD MINING COMPANIES' DIRECTORS' REPORTS FOR THE QUARTER ENDED 30th SEPTEMBER, 1954

(All Companies mentioned are incorporated in the Union of South Africa)

PRESIDENT BRAND GOLD MINING COMPANY, LIMITED

ISSUED CAPITAL.....£3,250,000

The mine reached the production stage at the beginning of August, 1954. The following results were obtained during the months of August and September :—

TONS CRUSHED.....61,000

Per Ton
Milled
s. d.

Working Revenue.....£346,880 .. 113 8.7
Working Costs.....212,493 .. 69 8.0

WORKING PROFIT for the two months ended
September 30, 1954.....£134,387 .. 44 0.7

CAPITAL EXPENDITURE

Capital expenditure for the quarter was £550,476 bringing the total for the nine months ended September 30, 1954, to £2,105,323. Of the underground development costs incurred since production commenced, £122,000 has been charged to capital account. This amount is included in the figure of £550,476 shown above.

No. 1 SHAFT AREA.—Development for the quarter totalled 17,708 ft., of which 2,817 ft. were on the Basal Reef. The following were the results obtained :—

Sampled : 2,755 ft., averaging 142.01 dwt. over 8.03 in., equivalent to 1,140 in.-dwt.

Payable : 2,710 ft., equal to 98.37 per cent of the footage sampled, averaging 144.19 dwt. over 8.03 in., equivalent to 1,158 in.-dwt.

No. 2 SHAFT AREA.—Development for the quarter totalled 3,569 ft. None of this development was on reef. The cutting of the main pump station and sumps continued but both this work and development were delayed by the intersection of water-bearing strata.

VAAL REEFS EXPLORATION AND MINING COMPANY, LIMITED

ISSUED CAPITAL.....£1,825,000

DEVELOPMENT.—The development footage for the quarter totalled 9,835 ft., and gave the following results :—

Sampled : 2,430 ft., averaging 92.81 dwt. over 5.56 in., equivalent to 516 in.-dwt.

Payable : 2,145 ft., equal to 88.3 per cent of the footage sampled, averaging 101.96 dwt. over 5.62 in., equivalent to 573 in.-dwt.

No. 1 SHAFT SYSTEM—

No. 1 VERTICAL SHAFTS.—The erection of the sinking hoists of the ventilation shaft was completed and the shaft was sunk to a depth of 64 ft. below the collar during the quarter.

Good progress was made on the erection of the concrete headgear and the sinking hoists of the main shaft and it is anticipated that sinking operations will commence at this shaft towards the end of the current year.

No. 1 SUB-VERTICAL SHAFTS.—The sub-vertical ventilation shaft was sunk 896 ft. to a total depth of 1,219 ft. below the main bank on 40 level. Stations were cut at 47 level and 50 level and a crosscut was advanced from each station.

The erection of the platform hoist and the 1,800 H.P. permanent rock hoist at the sub-vertical main shaft was nearing completion at the end of the quarter. The excavation for the sheave wheels has been completed and slipping of the headgear portion of the shaft to full size has commenced.

GENERAL.—The railway line from the No. 3 Joint Shaft to the No. 1 Vertical Shafts has been completed. The construction of houses for European employees, surface workshops, compounds and other buildings is proceeding satisfactorily.

A start has been made on the excavations for the foundations of the reduction plant.

CAPITAL EXPENDITURE.—Capital Expenditure for the quarter ended September 30, 1954, was £589,226, making a total of £1,167,356 for the nine months to September 30, 1954.

SPRINGS MINES, LIMITED

ISSUED CAPITAL.....£2,527,500

TONS CRUSHED.....386,000

Per Ton
Milled
s. d.

Working Revenue.....£667,989 .. 34 7
Working Costs.....645,880 .. 33 5

WORKING PROFIT.....£22,109 .. 1 2

The estimated working profit for the nine months ended September 30, 1954 is £69,044.

TAXATION AND GOVERNMENT'S SHARE OF PROFITS.—It is estimated that the Company's liability under this heading in respect of profits earned during the nine months ended September 30, 1954, is £4,400.

CAPITAL EXPENDITURE.—£1,075.

DEVELOPMENT.—The development footage for the quarter totalled 6,543 ft., and gave the following results :—

Sampled : 5,790 ft., averaging 10.86 dwt. over 14.42 in., equivalent to 157 in.-dwt.

Payable : 1,730 ft., equal to 29.9 per cent of the footage sampled, averaging 25.10 dwt. over 16.55 in., equivalent to 415 in.-dwt.

WESTERN HOLDINGS, LIMITED

ISSUED CAPITAL.....£1,874,094

TONS CRUSHED.....154,000

Per Ton
Milled
s. d.

Working Revenue.....£722,686 .. 93 10.3
Working Costs.....427,592 .. 55 6.4

WORKING PROFIT FOR QUARTER.....£295,094 .. 38 3.9

The estimated working profit for the nine months ended September 30, 1954 (including sundry revenue) is £584,670. No taxation and no share of profit is payable to the Government.)

CAPITAL EXPENDITURE.—£206,085.

Of the underground development costs incurred during the quarter an amount of £130,000 was charged to capital account. This amount is included in the total of £206,085.

UNDERGROUND DEVELOPMENT.—A total of 17,405 ft. of underground development was carried out during the quarter, of which 4,748 ft. were on the Basal Reef. The following were the results obtained :—

Sampled : 4,625 ft., averaging 132.57 dwt. over 6.28 in., equivalent to 833 in.-dwt.

Payable : 4,150 ft., equal to 89.73 per cent of the footage sampled, averaging 144.95 dwt. over 6.35 in., equivalent to 920 in.-dwt.

NOTE : The above figures include all development carried out on the Basal Reef horizon during the quarter.

The results obtained from Basal Reef development in the vicinity of individual shafts were as follows :—

No. 1 Shaft Area :

Sampled : 2,720 ft., averaging 132.69 dwt. over 7.13 in., equivalent to 946 in.-dwt.

Payable : 2,490 ft., equal to 91.54 per cent of the footage sampled, averaging 140.82 dwt. over 7.28 in., equivalent to 1,025 in.-dwt.

No. 2 Shaft Area :

Sampled : 1,905 ft., averaging 132.33 dwt. over 5.07 in., equivalent to 671 in.-dwt.

Payable : 1,660 ft., equal to 87.14 per cent of the footage sampled, averaging 154.06 dwt. over 4.95 in., equivalent to 763 in.-dwt.

The 41 Haulage North, which is being advanced towards the Free State Geduld property, had reached a point approximately 500 ft. from the common boundary by the end of the quarter. The Basal Reef was intersected at this point and of the 79 ft. of reef development accomplished in this area during the quarter, 70 ft. was sampled, all of which proved payable, averaging 99.30 dwt. over 15.73 in., equivalent to 1,562 in.-dwt.

LORAINÉ GOLD MINES, LIMITED

ISSUED CAPITAL.....£5,538,173 10 0

(NOTE : (a) 5,377,025 of the reserve shares are under option at 12s. 6d. per share to January 31, 1955.

(b) As consideration for the subscription of shares and the provision of loan facilities, the Anglo American Corporation of South Africa, Limited, has been given the right up to and including December 31, 1957, to subscribe for 2,750,000 reserve shares in the Company at the price of 20s. per share.)

CAPITAL.—By Special Resolution passed at an Extraordinary General Meeting of Shareholders held on October 5, 1954, the Authorised Capital of the Company was increased from £7,500,000 to £9,625,000, divided into 19,250,000 shares of 10s. each.

In terms of the arrangements concluded with Anglo American Corporation of South Africa, Limited, the Corporation has subscribed at 20s. per share for 4,953,372 shares in the Company and the Company has purchased 4,953,372 of 6 per cent Notes held by Anglo American Corporation and associated companies at par.

As consideration for the subscription of these shares and the provision of loan facilities, Anglo American Corporation of South Africa, Limited, has been given the right, exercisable up to and including December 31, 1957, to subscribe at 20s. per share for 2,750,000 shares in the Company.

UNDERGROUND DEVELOPMENT.—During the quarter, a total of 24,041 ft. of underground development was accomplished, of which 3,081 ft. were on Basal Reef. The following were the results obtained :—

Sampled : 3,015 ft., averaging 36.41 dwt. over 6.26 in., equivalent to 228 in.-dwt.

Payable : 2,290 ft., equal to 75.95 per cent of the footage sampled, averaging 42.93 dwt. over 6.26 in., equivalent to 269 in.-dwt.

NOTE : The above figures include all development carried out on the Basal Reef horizon during the quarter.

The results obtained from Basal Reef development in the vicinity of individual shafts were as follows :—

No. 1 SHAFT AREA :

Sampled : 2,600 ft., averaging 37.83 dwt. over 6.07 in., equivalent to 230 in.-dwt.

Payable : 2,025 ft., equal to 77.88 per cent of the footage sampled, averaging 43.79 dwt. over 6.09 in., equivalent to 267 in.-dwt.

No. 2 SHAFT AREA :

Sampled : 415 ft., averaging 29.20 dwt. over 7.47 in., equivalent to 218 in.-dwt.

Payable : 265 ft., equal to 63.86 per cent of the footage sampled, averaging 37.59 dwt. over 7.57 in., equivalent to 285 in.-dwt.

Development operations at No. 1 Shaft were adversely affected by a strike by underground workers from August 30 to September 3, 1954, and by a serious accident in the shaft which was caused by a runaway locomotive and which resulted in the shaft being out of commission from September 9 to September 16, 1954.

REDUCTION PLANT.—Satisfactory progress was made on all sections of the plant under construction. The plant started operating for test purposes on October 1, 1954.

CAPITAL EXPENDITURE

Capital Expenditure for the quarter ended September 30, 1954, was £918,302, bringing the total for the nine months to September 30, 1954, to £2,546,844.

EAST DAGGAFONTEIN MINES, LIMITED

ISSUED CAPITAL.....	£1,865,000	
TONS CRUSHED.....	282,000	Per Ton Milled
		s. d.
Working Revenue.....	£594,608	42 2
Working Costs.....	454,434	32 3
WORKING PROFIT.....	£140,174	9 11

The estimated working profit for the nine months ended September 30, 1954, is £419,778.

TAXATION AND GOVERNMENT'S SHARE OF PROFITS.—It is estimated that the Company's liability under this heading in respect of profits earned during the nine months ended September 30, 1954, is £186,900.

CAPITAL EXPENDITURE.—Nil.

DEVELOPMENT.—

Main Reef Leader: The development footage for the quarter totalled 5,608 ft., and gave the following results:—
Sampled: 3,795 ft., averaging 13.22 dwt. over 7.23 in., equivalent to 96 in.-dwt.

Payable: 1,045 ft., equal to 27.5 per cent of the footage sampled, averaging 25.09 dwt. over 9.53 in., equivalent to 239 in.-dwt.

Kimberley Reef: In addition, a total of 5,362 ft. was accomplished on the horizon of the Kimberley Reef.

Sampled: 4,340 ft., averaging 20.82 dwt. over 3.77 in., equivalent to 78 in.-dwt.

Payable: 935 ft., equal to 21.5 per cent of the footage sampled, averaging 55.49 dwt. over 4.32 in., equivalent to 240 in.-dwt.

PRESIDENT STEYN GOLD MINING COMPANY, LIMITED

ISSUED CAPITAL.....£2,444,174 15s. 0d.

(NOTE: Of the 2,223,301 reserve shares of 5s. each, 2,000,000 are under option to Anglo American Corporation of South Africa, Limited, at 20s. per share to June 30, 1955.)

TONS CRUSHED.....	152,500	Per Ton Milled
		s. d.
Working Revenue.....	£572,134	75 0.4
Working Costs.....	431,293	56 6.8
WORKING PROFIT FOR QUARTER.....	£140,841	18 5.6

The estimated working profit for the six months ended September 30, 1954 (including sundry revenue) is £164,238. No taxation and no share of profit is payable to the Government.

CAPITAL EXPENDITURE.—£819,902.

Capital expenditure on the construction of the Uranium Plant was £550,852. Of the underground development costs incurred during the quarter, an amount of £135,000 was charged to capital account. Both of these amounts are included in the total of £819,902.

UNDERGROUND DEVELOPMENT.—During the quarter a total of 20,314 ft. of underground development was accomplished, of which 4,574 ft. were on Basal Reef. The following were the results obtained:—

Sampled: 4,515 ft., averaging 78.09 dwt. over 8.02 in., equivalent to 626 in.-dwt.

Payable: 4,170 ft., equal to 92.36 per cent of the footage sampled, averaging 83.79 dwt. over 7.99 in., equivalent to 669 in.-dwt.

Note: The above figures include all development carried out on the Basal Reef horizon. The results obtained from Basal Reef development in the vicinity of individual shafts were as follows:—

No. 1 Shaft Area:

Sampled: 2,435 ft., averaging 46.64 dwt. over 8.77 in., equivalent to 409 in.-dwt.

Payable: 2,105 ft., equal to 86.45 per cent of the footage sampled, averaging 51.69 dwt. over 8.83 in., equivalent to 456 in.-dwt.

No. 2 Shaft Area:

Sampled: 2,080 ft., averaging 123.22 dwt. over 7.15 in., equivalent to 881 in.-dwt.

Payable: 2,065 ft., equal to 99.28 per cent of the footage sampled, averaging 124.30 dwt. over 7.13 in., equivalent to 886 in.-dwt.

REDUCTION PLANT.—The extensions of the plant to a milling capacity of 125,000 tons a month were complete by the end of the quarter.

URANIUM PLANT.—Satisfactory progress was maintained on all sections of the plant under construction.

THE SOUTH AFRICAN LAND AND EXPLORATION COMPANY, LIMITED

ISSUED CAPITAL.....	£433,125	
TONS CRUSHED.....	308,000	Per Ton Milled
		s. d.
Working Revenue.....	£708,442	46 0
Working Costs.....	540,310	35 1
WORKING PROFIT.....	£168,132	10 11

The estimated working profit for the nine months ended September 30, 1954, is £491,100.

TAXATION AND GOVERNMENT'S SHARE OF PROFITS.—It is estimated that the Company's liability under this heading in respect of profits earned during the nine months ended September 30, 1954, is £207,100.

CAPITAL EXPENDITURE.—£7,886.

DEVELOPMENT.—The development footage for the quarter totalled 14,157 ft., and gave the following results:—

Sampled: 10,140 ft., averaging 13.39 dwt. over 19.32 in., equivalent to 259 in.-dwt.

Payable: 4,415 ft., equal to 43.5 per cent of the footage sampled, averaging 24.67 dwt. over 20.89 in., equivalent to 515 in.-dwt.

WESTERN REEFS EXPLORATION AND DEVELOPMENT COMPANY, LIMITED

ISSUED CAPITAL.....	£1,750,000	
TONS CRUSHED.....	354,000	Per Ton Milled
		s. d.
GOLD—		
Working Revenue.....	£854,641	48 3
Working Costs.....	659,456	37 3
WORKING PROFIT.....	£195,185	11 0
URANIUM—		
Working Profit (Estimated).....	£396,000	
TOTAL WORKING PROFIT.....	£591,185	

The estimated total working profit for the nine months ended September 30, 1954, is £1,614,957.

TAXATION AND GOVERNMENT'S SHARE OF PROFITS.—It is estimated that the Company's liability under this heading in respect of profits earned during the nine months ended September 30, 1954, is £3,100.

CAPITAL EXPENDITURE.—Nil.

URANIUM LOANS.—Quarterly instalment, redemption and interest £151,193.

DEVELOPMENT.—The development footage for the quarter totalled 20,715 ft., and gave the following results:—

Sampled: 10,915 ft., averaging 14.23 dwt. over 22.77 in., equivalent to 324 in.-dwt.

Payable: 5,855 ft., equal to 53.6 per cent of the footage sampled, averaging 22.93 dwt. over 24.20 in., equivalent to 555 in.-dwt.

Vaal Reef.—The above figures include the following footages and values in development on the Vaal Reef horizon:—

Footage Driven: 6,988.

Sampled: 2,825 ft., averaging 59.65 dwt. over 11.35 in., equivalent to 677 in.-dwt.

Payable: 2,150 ft., equal to 76.1 per cent of the footage sampled, averaging 71.86 dwt. over 12.19 in., equivalent to 876 in.-dwt.

FARMS GOEDGENOEG No. 62 and NOOTGEDACHT No. 53.—In addition, a total of 1,826 ft. was accomplished in portions of these farms which are outside the Mining Lease Area.

Results were:—

Sampled: 1,010 ft., averaging 11.23 dwt. over 34.06 in., equivalent to 382 in.-dwt.

Payable: 685 ft., equal to 67.8 per cent of the footage sampled, averaging 13.09 dwt. over 40.63 in., equivalent to 532 in.-dwt.

DAGGAFONTEIN MINES, LIMITED

ISSUED CAPITAL.....	£1,750,000	
TONS CRUSHED.....	688,000	Per Ton Milled
		s. d.
GOLD—		
Working Revenue.....	£1,976,823	57 6
Working Costs.....	997,022	29 0
WORKING PROFIT.....	£979,801	28 6
URANIUM—		
Working Profit (Estimated).....	367,000	
TOTAL WORKING PROFIT.....	£1,346,801	

The estimated total working profit for the nine months ended September 30, 1954, is £3,856,930.

TAXATION AND GOVERNMENT'S SHARE OF PROFITS.—It is estimated that the Company's liability under this heading in respect of profits earned during the nine months ended September 30, 1954, is £1,325,600.

CAPITAL EXPENDITURE.—£54,306.

URANIUM LOANS.—Quarterly instalment, redemption and interest £127,825.

DEVELOPMENT.—Main Reef Leader: The development footage for the quarter totalled 4,504 ft., and gave the following results:—

Sampled: 4,275 ft., averaging 13.88 dwt. over 11.64 in., equivalent to 162 in.-dwt.

Payable: 1,905 ft., equal to 44.6 per cent of the footage sampled, averaging 22.93 dwt. over 13.09 in., equivalent to 300 in.-dwt.

Kimberley Reef: In addition, a total of 8,400 ft. was accomplished on the horizon of the Kimberley Reef.

Sampled: 6,595 ft., averaging 5.06 dwt. over 26.26 in., equivalent to 133 in.-dwt.

Payable: 1,645 ft., equal to 24.9 per cent of the footage sampled, averaging 18.52 dwt. over 22.20 in., equivalent to 411 in.-dwt.

BRAKPAN MINES, LIMITED

ISSUED CAPITAL.....	£1,150,000	
TONS CRUSHED.....	329,000	Per Ton Milled
		s. d.
Working Revenue.....	£686,799	41 9
Working Costs.....	650,452	39 6
WORKING PROFIT.....	£36,347	2 3

The estimated working profit for the nine months ended September 30, 1954, is £122,053.

TAXATION AND GOVERNMENT'S SHARE OF PROFITS.—It is estimated that the Company's liability under this heading in respect of profits earned during the nine months ended September 30, 1954, is £10,700.

CAPITAL EXPENDITURE.—Nil.

DEVELOPMENT.—The development footage for the quarter totalled 12,497 ft., and gave the following results:—

Sampled: 9,570 ft., averaging 5.29 dwt. over 45.16 in., equivalent to 239 in.-dwt.

Payable: 2,780 ft., equal to 29.0 per cent of the footage sampled, averaging 12.77 dwt. over 49.87 in., equivalent to 637 in.-dwt.

(continued overleaf)

FREE STATE GEDULD MINES, LIMITED

ISSUED CAPITAL.....£1,768,151 10s. 0d.

(NOTE: £3,925,333 10s. 0d. of 6% Registered Convertible Notes issued by the Company are convertible at any time up to and including January 29, 1955, into shares in the Company of 5s. each at a price of 55s. per share.)

UNDERGROUND DEVELOPMENT.—During the quarter a total of 14,830 ft. of underground development was accomplished, of which 1,475 ft. were on Basal Reef. The following were the results obtained:—

Sampled: 1,445 ft., averaging 106.42 dwt. over 5.92 in., equivalent to 630 in.-dwt.

Payable: 1,290 ft., equal to 89.27 per cent of the footage sampled, averaging 115.09 dwt. over 6.03 in., equivalent to 694 in.-dwt.

NOTE: The above figures include all development carried out on the Basal Reef horizon.

The results obtained from Basal Reef development in the vicinity of individual shafts were as follows:—

No. 1 Shaft Area:

Sampled: 1,345 ft., averaging 104.94 dwt. over 6.07 in., equivalent to 637 in.-dwt.

Payable: 1,190 ft., equal to 88.48 per cent of the footage sampled, averaging 113.85 dwt. over 6.21 in., equivalent to 707 in.-dwt.

No. 2 Shaft Area:

Sampled: 100 ft., all of which proved payable, averaging 139.48 dwt. over 3.85 in., equivalent to 537 in.-dwt.

NO. 1 SHAFT AREA.—Excellent progress was made on the lining of the upcast section of the shaft during the quarter.

The intersection of water-bearing fissures, necessitating cementation, and considerable faulting retarded development operations.

NO. 2 SHAFT AREA.—Five main pumps were installed and commissioned on the permanent station on 51 level. The orepasses between the 45 and 51 levels were nearing completion. Satisfactory progress was made on the cutting of the belt station and the installation of the measuring bins in the shaft. It is expected that on completion of this work in the near future the development footage from this shaft will increase.

The intersection of water-bearing strata, necessitating cementation, retarded development operations.

DRIVE FROM WESTERN HOLDINGS, LIMITED.—The 41 Haulage North, which is being advanced from Western Holdings No. 1 Shaft towards the Company's property, had reached a point approximately 500 ft. from the common boundary at the end of the quarter. The Basal Reef was intersected at this point and of the 79 ft. of development accomplished on reef in the area, 70 ft. were sampled, all of which proved payable, averaging 99.30 dwt. over 15.73 in., equivalent to 1,562 in.-dwt.

CAPITAL EXPENDITURE.—Capital Expenditure for the quarter ended September 30, 1954, was £751,772, bringing the total for the nine months to September 30, 1954, to £2,018,233.

REDUCTION PLANT.—Good progress was maintained on all sections of the plant under construction.

London Office: 11 Old Jewry, E.C.2.
October 15, 1954.

For and on behalf of ANGLO AMERICAN CORPORATION OF SOUTH AFRICA LIMITED,
W. E. GROVES, London Secretary.

WELKOM GOLD MINING COMPANY, LIMITED

ISSUED CAPITAL.....£2,500,000

(NOTE: As consideration for granting the Company loan facilities up to an amount of £1,500,000, the Anglo American Corporation of South Africa, Limited, has been given the right to subscribe at any time prior to December 31, 1957, up to 1,000,000 shares in the Company at the price of 30s. per share.)

TONS CRUSHED.....229,000

		Per Ton Milled s. d.
Working Revenue	£578,596	50 6.4
Working Costs	£45,507	47 7.7
WORKING PROFIT FOR QUARTER	£33,089	2 10.7

The estimated working profit for the nine months ended September 30, 1954 (including sundry revenue) is £49,166. No taxation and no share of profit is payable to the Government.

CAPITAL EXPENDITURE.—£632,253.

Capital expenditure on the construction of the Uranium Plant amounted to £505,839. Of the underground development costs incurred during the quarter, an amount of £18,000 was charged to capital account. Both of these amounts are included in the total of £632,253.

UNDERGROUND DEVELOPMENT.—Underground development for the quarter totalled 14,706 ft., of which 5,689 ft. were on Basal Reef. The following were the results obtained:—

Sampled: 5,585 ft., averaging 66.33 dwt. over 6.48 in., equivalent to 430 in.-dwt.

Payable: 4,345 ft., equal to 77.80 per cent of the footage sampled, averaging 82.83 dwt. over 6.36 in., equivalent to 527 in.-dwt.

SHAFT SINKING.—No. 1 Shaft: The vertical winze from the 30 level horizon was sunk 175 ft. to the 3,175 ft. elevation. Work preparatory to the deepening of the main shaft was well advanced.

No. 2 Shaft: The shaft ore pass system from 27 level to 36 level was completed during the quarter. Work continued on the cutting of the temporary pump station on 36 level and on the installation of the ventilation airways connecting 35 and 32 levels to the main upcast section of 30 level. By the end of the quarter development was being undertaken on both the 30 and 32 levels.

REDUCTION PLANT.—The extension of the Reduction Plant to a milling capacity of 125,000 tons a month was completed.

URANIUM PLANT.—Good progress continued to be made on the erection of the Uranium Plant.

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